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Consumers' Research Bulletin

March 1951

CONSUMERS' RESEARCH

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Off the Editor's Chest

JUST as the consumer was beginning to achieve some standing in the market place as a person whose wants were to be catered to, the entire U.S. production and distribution system has been abruptly shifted to a semi-wartime economy. With government controls on many essential supplies and services, and scarcities of all types of civilian goods in the offing, the sellers' market will again have a field day, and purchasers will be expected to take what they can get and like it — or just take it and pay for it. Trade in durable goods, appliances, and automobiles has been brisk, but is expected to shift to soft goods, food, clothing, and luxuries as supplies of major mechanical and electrical items are depleted and production is curtailed by federal government orders.

With the spotlight of public interest turning to fabrics, it may be helpful to review the situation with respect to textiles. The memory of the ersatz fabrics and clothing turned out under the controls and restrictions of OPA has only recently begun to fade. There were linings which bled color into the fabrics of even expensive garments, floral designs in which the colors ran together when dry cleaned, linings that turned stiff when dry cleaned, fabrics so highly sized that they turned out to be only a little better than cheesecloth after the first washing, and garments that pulled apart at the seams after a few wearings.

Nor is the production of poor quality textiles a matter only of the OPA period. During the past year the experts of the National Institute of Cleaning and Dyeing have had occasion to deal with the problem of how to handle some new materials that cannot be successfully dry cleaned either with the customary Stoddard solvent, carbon tetrachloride, perchloroethylene, or water and a detergent. One type of ribbed-weave taffeta, for example, that has been quite fashionable for dresses represents an unbalanced weave in which a heavier filament yarn is used in the crosswise direction to form a rib. Wherever a needle has stitched the colored fabric, reports a study by the National Institute of Cleaning and Dyeing, yarn shifting occurs, exposing black or white filling yarns. Dry cleaning causes further slippage of the yarns or even breaking of the yarns in weakened areas. The same laboratory reports that taffetas with velvet stripes or dots often lose parts of their design when they are cleaned, and a new weave called "satlasé" may lose a portion of its textured surface effect if moisture is used in pressing. It should be noted too that these fabrics may be found in expensive dresses as

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Consumers' Research functions to provide unbiased information on goods bought by ultimate consumers. For their benefit (not for business or industry) and solely with the funds they provide, CR carries on tests and research on a wide variety of goods, materials, and appliances, and publishes the findings in CR Bulletin. Consumers' Research is a non-profit institution, and is organized and operates as a scientific, technical, and educational organization.

Symbols used to indicate sources of data and bases of ratings: **A**—recommended on basis of quality; **AA**—regarded as worthy of highest recommendation; **B**—intermediate with respect to quality; **C**—not recommended on basis of quality; **cr**—information from Consumers' Research's own tests or investigations; **1, 2, 3**—relative prices, **1** being *low*, **3** high. Note that price and quality are completely differentiated in CR's listings; **a quality judgment is independent of price; 50, 51**—year in which test was made or information obtained or organized by the staff of Consumers' Research.

It will be advantageous if you will, whenever possible, send prompt notice of change of address at least 5 weeks before it is to take effect, accompanying your notice with statement of your old address with name in full. At least a month's notice must be given in any case. This rule, however, regarding long advance notice does not apply to military personnel.

¶*CR will, of course, gladly change addresses for men and women in the services as often as required by changes in station and other circumstances.*

★★★For a brief cumulative index of 1951 BULLETINS preceding this issue, see page 25.

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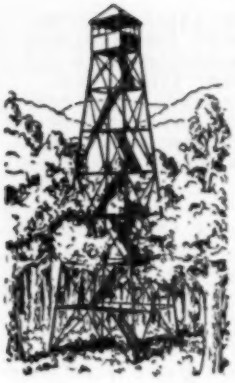


The Consumers' Observation Post

"IS IT A FACT," writes a CR subscriber, "that automobile manufacturers are beginning to use substitute materials in new cars?" After careful checking, one of CR's consultants came to the conclusion that the effect of government curtailment orders in early 1951 would chiefly result in cuts in chromium finishes, quality of finish of accessories, and such, and that it was not likely that current shortages would have any seriously unfavorable effect on the quality of the basic elements of the cars or their performance.

* * *

FEW CHANGES IN 1951 TELEVISION RECEIVERS will be noted, reports Television-Digest, except for the appearance of more 20-inch models. The trade journal goes so far as to predict that 1951 models "will mostly be identical internally" with those put out in 1950. In due course, however, substitute materials and production short-cuts are expected to result in poorer quality sets. In order to conserve scarce cobalt, for example, some speaker manufacturers, comments Television-Digest, are turning out units with smaller Alnico magnets which give poorer performance, requiring the listener to turn the volume control higher.

* * *

PRICES HAVE BEEN ZOOMING UPWARD so fast that the dealer's replacement cost of many items exceeds what the consumer has currently paid at retail. In Oakland, California, the La Salle Avenue Market took a full page advertisement the latter part of December 1950 to warn its customers what to expect when new stocks were ordered from its wholesalers. New supplies of Maxwell House coffee, for which consumers were then paying 81 cents per 1-pound can, were quoted at 84-1/2 cents wholesale; White Star - Bite Size tuna, selling for 25 cents a can, was 28 cents a can wholesale; Best Foods pint-size mayonnaise then 39 cents, replacement wholesale, 41 cents; Swanson's Boned Chicken, 6-ounce can selling for 46 cents, replacement wholesale, 49 cents; Spry or Snowdrift shortening, 1 pound selling for 31 cents, replacement wholesale, 36 cents. The impact on the consumer's pocketbook of the swift and appalling increase in the cost of important food items when replacement items reached the store's shelves was not lessened by this advertisement, but at least the home purchasing agent was mentally prepared for the bad news. The La Salle Avenue Market is to be commended for its courageous attempt to put its customers on notice of what to expect.

* * *

THOSE WHO TRAVEL ON BUSES should be fussy about proper ventilation, particularly if they notice an exhaust smell or if they get a headache during the ride. Early this year, a newspaper dispatch reported that 15 passengers on a New York to Philadelphia bus were sickened by carbon monoxide fumes from a defective exhaust pipe without being aware of what was happening. Two young children became ill from the fumes, and when their father had the driver stop at a wayside restaurant, it was discovered that several other passengers were taken ill or had fainted. It will be wise to insist on fresh air or to sit near the door when traveling by bus for any considerable distance.

* * *

TO PROTECT CONSUMERS from being gradually poisoned by the food they eat, a new chemical food control law may be needed, report investigators of a House committee looking into the use of new chemicals in foodstuffs. The scope of the investigation covered a wide range of products from insecticide sprays to bread. In their interim report, the committee commented on testimony by Food

and Drug Administration officials that of 704 chemicals being added to foods only 428 were definitely known to be safe, and pointed out that 276 chemicals were being used in food, "the safety of which has not been established to the satisfaction of the Food and Drug Administration and many other groups concerned with the health and safety of the public." Until necessary steps are taken to safeguard consumers' health on this score, it will be wise to read carefully the labels of all packaged foods and purchase only those which contain well-known ingredients that have long had acceptance as normal food constituents.

* * *

WOMEN LIVE LONGER THAN MEN, according to a recent study by the Metropolitan Life Insurance Company, which reported that death rates in every age group are much higher for men than women. The insurance agency's statisticians commented that the situation today is in marked contrast with that of 50 years ago when the difference in the death rate between the sexes was much smaller. One factor accounting for the longer life span of women is attributed to the modernization of the home, with its labor-saving machinery. It is to be hoped that those in control of our economic destinies in Washington, D.C., will bear this fact in mind and, in reorienting factory production around war material, make certain that at least an adequate supply of repair parts is available to keep home appliances in running order.

* * *

SUPER-SLOW-PLAYING PHONOGRAPH RECORDS were suggested in December last year as a possible new development in the field. The president of Zenith Radio Corporation announced his belief that new record changers will be required to handle speeds as slow as 16 revolutions per minute. At present the two slow speeds available are 33-1/3 rpm. and 45 rpm. At the 16 rpm. speed mentioned, two sides of a 12-inch record would play for two hours.

* * *

THE PRICES CHARGED FOR HOTEL ROOMS reflect high taxes paid by hotels in many cities. In Chicago, for example, where personal property and real estate taxes are heavy, the Greater Chicago Hotel Association estimates that 10 of its downtown members with a total of about 10,800 rooms will have paid $216 per room in taxes in 1950. Since occupancy was around 78.5 percent, the occupied rooms carried the entire tax burden, which amounted to $275 per room. In the last analysis, consumers who occupied the rooms paid for these taxes, illustrating the well-known fact that most taxes, no matter on whom they are levied, are ultimately paid by the consumer.

* * *

OIL BURNERS, ELECTRIC STOVES, AND OTHER ELECTRICAL APPLIANCES are a great convenience when they operate at the turn of a switch, but in times of severe storms when power lines are blown down or put out of commission, the person with an all-electric set-up is faced with serious difficulties. After a widespread power failure which followed a heavy wind and rainstorm in the East last November, the suggestion was made to two large companies that they sponsor conversion grates which could be quickly installed over the oil burners. They are reported to have taken the position that they didn't want to do any pinch-hitting for the oil industry. Similarly, men in the oil-burner industry failed to show any interest in recognizing the need for providing for an emergency conversion of their product when electricity fails for any length of time. The most practicable solution seems to be a plain cast grate which can be laid over the oil-burning refractory for an emergency fire, although this method of firing will seem pretty inconvenient and makeshift for consumers who have gotten accustomed to the great convenience of "automatic" heat.

* * *

DOES A STATE have the right to invoke its own anti-monopoly law to prevent a union from regulating the selling price of fish? That is a question before the United States Supreme Court. The Atlantic Fishermen's Union raised wholesale fish prices by limiting the size of the catch, requiring that fish brought into Gloucester, Mass., be sold under union rules in the "union selling room," by refusing to sell to certain dealers, and fixing the price at which fish were sold in Boston. The Massachusetts Supreme Court held that the Fishermen's Union had been guilty of price-fixing. It will be interesting to note whether the U. S. Department of Justice which has been so active in filing

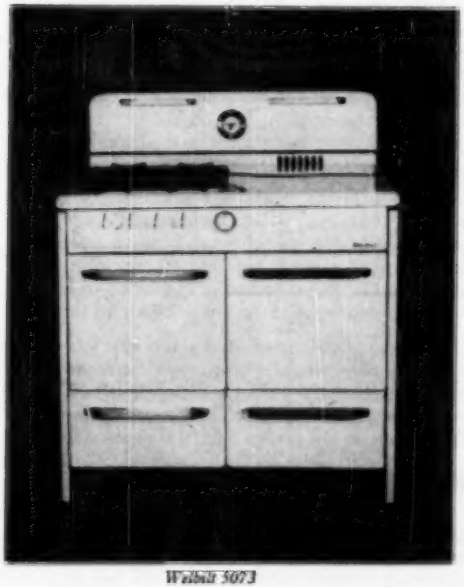
(The continuation of this section is on page 29)

GAS STOVES

A GAS STOVE purchased for use in the home should always be one that bears the approval symbol of the American Gas Association (A.G.A.). Although the presence of this symbol does not assure high comparative quality, it does signify that the stove has met important basic requirements with regard to safety of design and has met certain minimum standards of performance. (Since a gas stove which is not properly designed and built can involve serious hazards to the user in respect to fire or explosion, or carbon monoxide poisoning, the consumer should not buy or use a gas appliance or a gas utilization accessory that does not bear the A.G.A. symbol.) A Certified Performance (CP) approval indicates that in addition to meeting the basic requirements for approval by the A.G.A., certain added features have been incorporated in the design of the stove which are intended further to enhance its over-all usefulness. The regular top burner of a CP-approved gas stove, for example, must have an efficiency of at least 45 percent and giant burners approximately 41 percent (at least 40 percent efficiency is required of regular and giant burners for A.G.A. approval). It will often be the case that the burners of stoves with only the regular A.G.A. approval will meet the CP requirements.

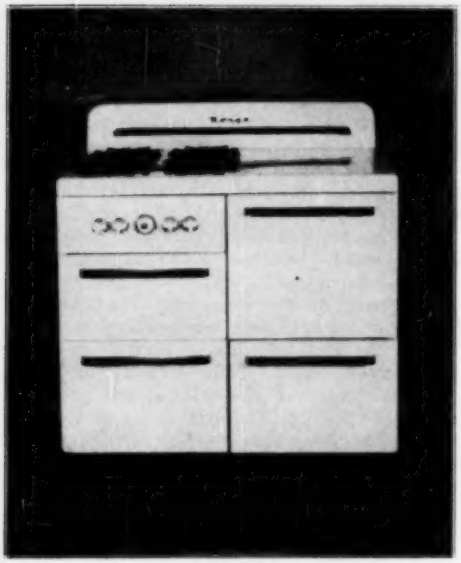
Oven size, an important consideration in many homes, was found, on an average, to be significantly larger in the group of gas stoves tested than in the group of electric stoves tested and reported in CR's BULLETIN, July 1950. In addition, it would appear that the gas stove manufacturers have corrected a fault previously noted in that ovens as now supplied have much smaller temperature gradients at a given setting of the thermostat than hitherto. Whereas in the 1948 tests, temperatures in various parts of the oven varied from 4° to 27° with the thermostat set at 400°, the largest temperature variation was only 8° in the latest test, under the same conditions, and the average for all stoves in the test was only a little over 2°. The new stoves should, therefore, give somewhat improved dependability and uniformity in baking.

Another consideration of importance is the usefulness of accessories (extras) with which the unit may be equipped. Such items as deep-well cookers, top-of-stove grills, automatic timers, oven windows, warming ovens, separate broiler, and oven pilot, to name a few, all add to the initial cost of a stove. If the housewife does not usually prepare such foods as soups, stews, baked beans, or oatmeal, for instance, the deep-well feature may be a disadvantage since it leaves only three burners available for top-



Welbilt 5073

Detroit Jewell A 81017M



Norge N-11

Supreme O5SMR 2520B

of-stove cooking. It is also important to consider fully whether the working space will be adequate. Four burners grouped together usually give more available working space.

It is especially important to note that operation of pilot lights costs money. The divided-top stoves tested used two, one for each side, and some stoves now available have, in addition, an oven pilot, which is a requirement on a CP-approved stove. A single pilot light can cost $6.80 a year to operate (using manufactured gas of 540 Btu per cubic foot and selling at $1.40 per thousand cubic feet), even though it complies with and is adjusted to meet the A.G.A. approval requirements which allow an input up to 300 Btu per hour. (Most pilots, if adjusted correctly, burn 90 to 150 Btu per hour and will thus cost less than $3.40 a year.) It will cost more than twice this amount if bottled gas at 12 cents per pound is used.

CR's Tests

The test procedures followed for this report were essentially the same as those which were used in 1948. A.G.A. Laboratory methods, outlined in Approval Requirements for Domestic Gas Ranges, were used wherever applicable, with some modifications made where it appeared that a change of procedure would give results of adequate accuracy. Each stove was given a general engineering examination covering its design, burner, oven, and storage space arrangement, and presence of special equipment. The short-time efficiencies of one giant (when present) and one regular burner on each stove were measured. The top burners of all stoves in the test passed the A.G.A. approval requirements and the *Chambers, Detroit Jewell, Kenmore, Maytag, Norge,* and *Welbilt* met or exceeded the CP efficiency requirements in this respect. Time-to-boil, maintenance of boiling efficiency, and gas input at simmer setting were measured. Scorch patterns were obtained.

Oven operation was checked at 250°, 400°, and 500°. The following information was obtained from the data: (a) the speed with which the oven heated; (b) accuracy of thermostatic control; (c) amount of heat required to maintain temperatures selected; (d) evenness of heat distribution in the oven; and (e) effectiveness of insulation in keeping cool the surfaces of the stove adjacent to the oven.

The heat distribution of the broilers was determined by observing the browning pattern produced in several minutes on slices of white bread placed on the broiling rack, four inches from the flame. Heat input to the broiler was also determined.

Bases for Ratings

Actual measured efficiencies of the top burners as determined by heating equal measured amounts of water, and the Btu input per cubic foot to maintain oven temperatures are likely the two most im-

portant factors in determining choice of a stove for the average consumer. Since each stove met or exceeded the A.G.A. approval requirements in the first respect, none has received a rating below *B. Intermediate*. There were significant differences noted in these respects, however, and these differences together with an evaluation of the design characteristics, scorch patterns, oven heat distribution, and effectiveness of oven insulation in shielding the exterior of the stove are mentioned in the listings.

It should be emphasized here that carelessness on the part of the user can greatly reduce the economy of operation which is to be obtained with an efficient burner. One factor the homemaker should always bear in mind is the importance of the correct type of flame. It is important to know when the flame burns in an abnormal manner so that the gas company can be notified that the burner requires adjustment. A correct flame for most appliances has a sharply defined inner, greenish, cone shape, and a clear, steady outer blue border.

CR cannot guarantee that a stove would have the same rating using bottled gas or natural gas (CR's tests were made using manufactured gas). It is rather to be expected, however, that the stove would have the same relative rating, for manufacturers who have the engineering know-how and skill to make a good burner for one kind of gas will be rather likely to make a good burner for the other. (The differences involved in stoves for different kinds of gas relate only to the burners themselves and on several of the stoves tested amounted only to adjusting the gas input valve to the proper Btu input value.)

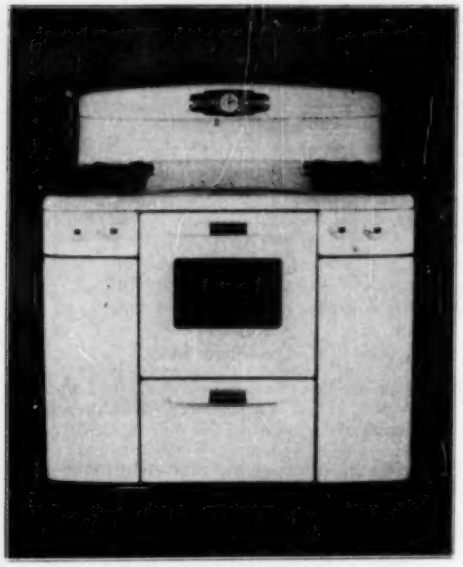
The working surface of all stoves tested was about 36 inches high. The over-all dimensions as given in the listings do not include hardware such as handles, etc. The figures given for oven size refer to depth, width, and height in that order. Burner separation as noted in the listings refers to the center-to-center distance of the grouped top-of-stove elements and gives a measure of the ability of the stove to accommodate comfortably more than one large pot or frying pan. The *Norge* and *Tappan* had "push-in" safety controls, considered desirable.

A. Recommended

Welbilt, Model 5073 (Welbilt Stove Co., Inc., Maspeth, L.I., N.Y.) $115. 37.5 in. wide x 24 in. deep. Four regular burners grouped on left side of top (no giant burner), 8½-in. separation. Broiler beneath oven, located on right side. Burner controls on left front of stove. One large cabinet and one small storage drawer. **Burners:** Efficiency of regular burner, 47%, above average. Time to boil test quantity of water, somewhat less than average. Scorch pattern, good. Relative efficiency at "simmer" setting, above average. **Broiler:** Heat distribution, good; gas consumption, somewhat higher than average. **Oven:** Size, 18 x 16 x 13.5 in. (2.2 cu. ft.). Rate of preheating, much faster than average. Gas consumption to maintain temperature about average at 250°, higher than average at 400° and 500°. Heat distribution, excellent. Thermostat settings were sufficiently accurate. Insulation effectiveness, poor;

Chambers 61C

Maytag Dutch Oven M6140GA



Tappan Deluxe MVK 63-16

Florence D-9820-0

oven door reached temperature of 210° after 1 hr. operation of oven at 500°. **Construction and design:** While the design would make for over-all economical operation, the construction was only fairly good. Extras included electric clock and timer, and top light. Burner grids, fairly steady and designed to support small pans without danger of upset. Top of stove, broiler, and oven, fairly easy to clean. One pilot light. Drip pan under burners, useful accessory. **1**

Detroit Jewell, Model A 81017M (Detroit Michigan Stove Co., Detroit 31) $188. 38 in. wide x 24.5 in. deep. Split burner arrangement, one giant and one regular burner on each side, 9-in. separation. High broiler at left side; oven on right side. Controls located across front of stove. Two small storage drawers, one considered of little usefulness. **Burners:** Efficiency of giant burner, 41%, average; of regular burner, 45%, average. Time to boil test quantity of water, average. Scorch pattern, good on giant burner, poor on regular burner. Relative efficiency at "simmer" setting, below average. **Broiler:** Heat distribution, good; gas consumption, average. **Oven:** Size, 20 x 16.5 x 15 in. (2.9 cu. ft.). Rate of preheating, average. Gas consumption to maintain temperature, less than average. Heat distribution, very good. Thermostat setting, fairly accurate at 250°, slightly high at 400° and 500°. Insulation effectiveness, only fair; oven door reached temperature of 200° after 1 hr. operation of oven at 500°. **Construction and design:** Good. Spring-wound timer. Back-splash light. Broiler drawer would be especially difficult to clean after use because of corrugated construction of sides. Three of four grids wobbled but grids were well designed to support small or large diameter pans or pots without danger of upset. Top of stove and oven fairly easy to clean. Two pilot lights. Drip pans under burners, useful accessory. **2**

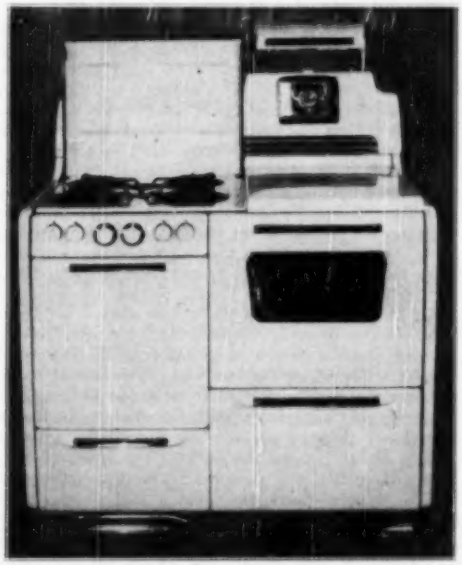
Norge, Model N-11 (Norge Div., Borg-Warner Corp., Detroit 26) $180. 38 in. wide x 24.5 in. deep. Burners on left, one "giant," three regular, 10-in. separation. Broiler beneath oven, on right side. Burner controls at left front. Two small storage drawers. **Burners:** Efficiency of giant burner, 42%, average; of regular burner, 45%, average. Time, to boil test quantity of water — giant burner, average; regular burner, somewhat less than average. Scorch pattern, good on giant burner, very good on regular burner. Relative efficiency at "simmer" setting — giant burner, above average; regular burner, average. **Broiler:** Heat distribution, good; gas consumption, slightly above average. **Oven:** Size, 19¼ x 16 x 14¾ in. (2.6 cu. ft.). Rate of preheating, somewhat faster than average. Gas consumption to maintain temperature, less than average. Heat distribution, very good. Thermostat setting, low at 250°, correct at 400° and 500°. No drift at any setting tested. Insulation effectiveness, only fair; part of oven door reached temperature of 200°. **Construction and design:** Good. Extras included simmer settings. Top of stove and oven, fairly easy to clean. Broiler, difficult to clean. Grids rock or wobble, but support large and small pans without danger of tipping. Drip pan. One pilot light. **2**

Supreme, Model 05SMR 2520B (Montgomery Ward's Cat. No. 68—2520F) $165, plus shipping charges. 40 in. wide x 25.5 in. deep. Split burner arrangement, two giant, two regular, 10½-in. separation. High broiler on left, oven on right side. Two small storage drawers. **Burners:** Efficiency of giant burner, 41%, average; of regular burner, 47%, above average. Time to boil test quantity of water, average. Scorch patterns, fair. Relative efficiency at "simmer" setting, below average. **Broiler:** Heat distribution, fairly good; gas consump-

tion, less than average. **Oven:** Size, 19 x 18 x 15 in. (3.0 cu. ft.). Rate of preheating, slower than average. Gas consumption to maintain temperature, average at 250°, much less than average at 400° and 500°. Heat distribution, good. Thermostat settings, very high at 250° with considerable drift; about correct at 400° and 500°. Insulation effectiveness, poor; oven door reached 220°. **Construction and design:** Good, except insufficient clearance between broiler door and drawer beneath. Extras included separate broiler, electrical receptacle, oven light, electric clock and timer, top-of-stove light, oven window, and simmer settings. Top of stove considered easy to clean. Broiler difficult, oven fairly easy to clean. Two drip pans. Two pilot lights. Grids did not wobble and were well designed to accommodate small pots. **2**

Chambers, Model 61C (Chambers Corp., Shelbyville, Ind.) $400. 37.5 in. wide x 26.5 in. deep. Three regular burners and one *Thermowell* (not usable as surface burner) on right side of top, 11-in. separation; aluminum griddle which serves as top of broiler unit on left side; high broiler; oven on left side; small storage cabinet at right front. **Burners:** Controls located at right front of stove have individual removable locking keys which must be depressed before gas can be turned on, sound in purpose but design is considered unduly complicated. Efficiency of regular burners, 47%, above average. Time to boil test quantity of water, average. Scorch pattern, good. Relative efficiency at "simmer" setting, above average. **Broiler:** Heat distribution, very good; gas consumption, low. **Oven:** Size, 19¼ x 18½ x 11½ in. (2.4 cu. ft.). Rate of preheating, faster than average. Gas consumption to maintain temperature, relatively high. Heat distribution, excellent. Thermostat setting, high at 250°, fairly accurate at 400° and 500°. Insulation effectiveness, relatively good. Slight drift from preset oven temperatures. **Construction and design:** Very well-constructed stove with polished chrome-plated one-piece metal top much thicker than usual sheet metal top. Very little top working surface. Oven air intake and vent dampers close when gas supply to oven is turned off. Tests indicated that heat was retained in oven for a much longer time than in an oven with the usual open vents. Insulation consisted of usual layer of glass wool and a ½-in. thick asbestos board insert, but note that gas consumption to maintain oven temperature was relatively high; not to be expected in a stove costing 2 to 3 times as much as other good stoves. Spring-wound timer. Top of stove and oven considered difficult to clean. Grid design, fair; small diameter pots did not sit steadily unless particular care was taken in placing them on the grid. One pilot light. Drip pans, considered essential by some users, not provided. **3**

Maytag Dutch Oven, Model M6140GA (Maytag Co., Newton, Iowa) $250. 40 in. wide x 25.2 in. deep. Split burner arrangement, one giant, three regular burners, 10¾-in. separation. Broiler beneath oven, centrally located. Burner controls on top of back-splash, good location. Two storage cabinets. **Burners:** Efficiency of giant burner, 46%, of regular burner, 50%, both above average. Time to boil test quantity of water, somewhat less than average for both giant and regular burners. Scorch patterns, fair. Relative efficiency at "simmer" setting — giant burner, above average; regular burner, below average. **Broiler:** Heat distribution, good; gas consumption, less than average. **Oven:** Size, 18¾ x 18 x 15 in. (2.9 cu. ft.). Rate of preheating, very slow. Gas consumption to maintain temperature, average at 250°, less than average at 400° and 500°. Heat distribution, excellent. Thermostat setting, high at 250°, fairly accurate at 400° and 500°.



Kenmore 103.233001

Estate A.V. 5035

Universal Eton C12 2121ME, C-34722

Considerable drift in oven temperature at 250° setting. Insulation effectiveness, very good. **Construction and design:** Good. Dutch oven feature, in which oven vent damper closes when oven gas supply is turned off. Tests indicated that heat was retained in oven for a much longer time than in an oven with the usual open vents. Extras included simmer settings, spring-wound timer. Top of stove and oven considered to clean. Broiler difficult to clean (sides were part of stove, and would necessitate one's getting down on hands and knees), height adjustment good. Grids, steady and well designed. Two drip pans. Two pilots. **3**

Tappan Deluxe, Model MVK 63-16 (Tappan Stove Co., Mansfield, Ohio) $220. 40 in. wide x 26 in. deep. Split burner arrangement, one giant, two regular, and one small, all with simmer setting, 10½-in. separation. Broiler beneath oven, center of stove. Two cabinets for storage. **Burners:** Efficiency of giant burner, 40%, below average; regular burners, 46%, average; small, 46.5%. Time to boil test quantity of water, average. Scorch patterns, only fair. Relative efficiency at "simmer" settings, above average. **Broiler:** Heat distribution, very good; gas consumption, above average. **Oven:** Size, 19 x 16¾ x 15 in. (2.8 cu. ft.). Rate of preheating, slightly faster than average. Gas consumption to maintain temperature, less than average. Heat distribution, excellent. Thermostat setting, about correct at 250°, 400°, and 500°. Insulation effectiveness, fair; door reached temperature of 185°. **Construction and design:** Good. Extras included simmer settings, surface light, electric clock and timer, chrome-plated oven, oven light, and glass oven door window. Grids did not wobble but small pan would tip in one position on grid. Top of stove, oven, and broiler considered fairly easy to clean. Two pilots. Two drip pans. **3**

B. Intermediate

Florence, Model D-9820-0 (The Florence Stove Co., Lewisburg, Tenn.) $140. 36 in. wide x 24.5 in. deep. Split burner arrangement, one "giant," one regular burner on each side, 9½-in. separation. Low broiler, under oven on right side. Controls located across front of stove. One large, one small storage drawer. **Burners:** Efficiency of giant burner, 41%, average; of regular burner, 43%, less than average. Time to boil test quantity of water, somewhat longer than average. Scorch patterns, fair. Relative efficiency at "simmer" settings, below average. **Broiler:** Heat distribution, good; gas consumption, less than average. **Oven:** Size, 18 x 16 x 13.5 in. (2.2 cu. ft.). Rate of preheating, faster than average at 250° and 400° settings; about average at 500° setting. Gas consumption to maintain temperature, high at all settings. Heat distribution, very good. Thermostat settings, accurate at 250° and 400° settings; somewhat low at 500°. Effectiveness of insulation, poor; the control knobs above oven reached temperature of 210°. **Construction and design:** Fairly good. Extras included surface light and simmer settings. Grids, steady; usable for small pots, but could not be set level on one side of stove, a disadvantage, especially for pan frying. Top of stove and oven, fairly easy to clean. No drip pans. Two pilot lights. **1**

Kenmore, Model 103.233001 (Sears-Roebuck's Cat. No. 22—1956) $175, plus shipping. 42.5 in. wide x 24 in. deep. Burners on left of top of range, two giant, two regular, 9½-in. separation. High broiler on left side, oven on right side. Controls at left front. One large, one small storage drawer. **Burners:** Semi-enclosed design. Efficiency of giant burner, 42%, average; of regular burner, 50%, above average. Time to boil test quantity of water, less than average for both giant and regular burners. Scorch patterns, fairly good. Relative efficiency at "simmer" setting — giant burner, slightly below average; regular burner, above average. **Broiler:** Heat distribution, fairly good; gas consumption, less than average. **Oven:** Size, 17¾ x 20 x 14 in. (2.9 cu. ft.). Rate of preheating, slower than average. Gas consumption to maintain temperature, higher than average. Heat distribution, very good. Thermostat setting, high at 250°, low at 500°, with some drift at 400° setting. Insulation effectiveness, poor; one location on oven door reached temperature of 230°. **Construction and design:** Good. Extras included separate broiler, surface light, oven door window and light, top-of-stove cover for burners, locking device for top-burner controls, electric clock and timer, and electrical outlet. Top of stove considered fairly easy to clean. Broiler easy to clean, height adjustment good. Provision for drip pan, but pan not included with stove. Plastic rollers on drawers not considered desirable. Burner grids, stable (3-point suspension), but regular burner grids were not well designed to accommodate small diameter pots. Single pilot light. **2**

Estate, Model A.V. 5035 (Estate Stove Co., Hamilton, Ohio) $210. 38.5 in. wide x 25 in. deep. Split burner arrangement, one "giant," one regular burner on each side, 10-in. separation. Low broiler under oven, on

right side. Controls located across front of range. One large and one small storage drawer. **Burners:** Efficiency of "giant" burner, 40%, below average; of regular burner, 45%, average. Time to boil test quantity of water, somewhat longer than average. Scorch pattern, very good on giant burner, good on regular burner. Relative efficiency at "simmer" settings — giant burner, above average; regular burner, below average. **Broiler:** Heat distribution, very good; gas consumption, about average. **Oven:** Size, 19¾ x 17 x 16¼ in. (3.2 cu. ft.). Rate of preheating, average at 250°, slow at 400° and 500°. Gas consumption to maintain temperature, high at all settings tested. Heat distribution, very good. Thermostat settings, somewhat high at 250°, 400°, and 500°; some temperature change (drift) at 400° setting. Insulation effectiveness, relatively good, although oven door did reach temperature of 160°. **Construction and design:** Good. Extras included oven light, oven door window, two electrical receptacles, surface light, electric clock and timer, simmer settings. Grids, sufficiently steady but small pots would tip. Top of stove, fairly easy to clean. Drip pans, considered essential by some users, were not provided. Two pilot lights. **3**

Universal Eton, Model C12 2121ME, C-34722 (Cribben & Sexton Co., Chicago 12) $200. 36 in. wide x 23.5 in. deep. Split burner arrangement, one giant and three regular burners with simmer settings, 8½-in. separation. Broiler beneath oven on right side. Controls across front of stove. One large and one small storage drawer. **Burners:** Efficiency of giant burner, 42%, average; of regular burner, 42%, below average. Time to boil test quantity of water, somewhat longer than average. Scorch patterns, fair. Relative efficiency at "simmer" setting, higher than average. **Broiler:** Heat distribution, fair; gas consumption, high. **Oven:** Size, 18½ x 16 x 13¾ in. (2.3 cu. ft.). Rate of preheating, average. Gas consumption to maintain temperature, about average. Heat distribution, very good. Thermostat setting, about correct with no drift in oven temperatures. Insulation effectiveness, fair; oven door reached temperature of 190°. **Construction and design:** Good. Extras included simmer burners, preferred method (not simmer setting or click simmer setting), surface light, timer, and electrical outlet. Oven and top of stove, fairly easy to clean; broiler, difficult to clean. Burner grids, steady and designed to support small pans without danger of tipping. Drip pans. Two pilot lights. **3**

Laundry Marking Pen

FOR THE HOUSEWIFE, career girl, or bachelor, there is now available a convenient ball-point style of pen for identification marking of household linens or clothing. The *Taubman* pen has been advertised as "indelible" and "especially made for marking clothes." The manufacturer claims that it is "Used by Commercial Laundries Everywhere," and that it "Can also be used for ordinary writing." Consumers' Research, aware of the poor lasting qualities of ball-point pen ink in general, studied the writing of this pen, particularly in respect to the permanence of its markings.

Samples of markings on several kinds of fabrics were placed in the Fade-Ometer to test the light-fading resistance of the writing, and after 57 hours of exposure, it was noted that the ink had faded very little. (In this application, one hour of exposure in the Fade-Ometer was taken as equal to approximately 2.5 hours of summer sun at Washington, D. C.) Another sample of writing, on paper, was placed in a window for a period of daylight exposure of about 150 hours (with very little direct sun), and in this case fading was not detectable. Markings were also made on a Turkish towel, kitchen towel, "Indian Head" fabric, pillowcase, and a man's shirt, all of which had been laundered previously. The following day the fabric samples were laundered six times in an automatic washer, with *Lux*, in water at a temperature of 140°F. On most of the fabrics, the markings were retained fairly well after the six washings. It was noted that the more heavily marked strokes exhibited much better retention after laundering than the lighter markings. Another set of markings was made, and in this case the fabric samples were laundered about an hour later. These markings were not retained as well as those on which the ink had been allowed to set overnight, and the markings on the Turkish towel in particular were not very legible. (The manufacturer's directions do not suggest using heavy pressure in writing or that the writing should be done at least some hours ahead of the time when the fabrics would be washed; both of these procedures would be advantageous.)

From the test results, the *Taubman* pen would appear to be fairly satisfactory for identifying most fabrics, provided the ink markings are applied heavily, with firm pressure, and allowed to penetrate the fibers thoroughly before the fabric is laundered. Assuming no defect in manufacture of the pen, and that the pen does not remain unused for a very long period, it would appear to be quite serviceable and to contain enough ink for a large amount of laundry marking; it is believed that its use for this purpose would be economical as well as convenient.

A. Recommended

Taubman Laundry Marking Pen (Samuel Taubman, 1 W. 34 St., New York 1) $1. "Jumbo-Size" Refill Cartridge, 60c. Ball-point pen, made of plastic, with gilt cap and clip. Two samples were tested. After varying periods of use, both pens would cease to write, and it was then necessary to follow the printed instructions given by the manufacturer for restoring the flow of ink. One of the two pens had somewhat sparse ink flow and required more frequent adjustment than the other pen; the difference was probably one caused by a defect in manufacture or inspection.

Toilet Soaps

Some of the Best Are the Cheapest!

AMONG the many new synthetic detergents that have achieved popularity in washing clothes, dishes, and in other household uses, none has yet secured nationwide distribution in bar form in competition with the customary milled toilet soap for washing face and hands, although *VEL Beauty Bar* (Colgate-Palmolive-Peet), 25 cents, a synthetic detergent in cake form, has found popularity in a limited area.

Some preliminary investigation of *VEL* indicated that it was somewhat softer than *Camay* or *Palmolive* cakes but harder than *Ivory*. It produced a satisfactory lather although at first the lather was slightly more watery than that produced by the soaps. Limited hand washing tests showed no important differences between the cleansing efficiences of the toilet soaps and the *VEL* bar. When the four brands were soaked for 24 hours in water, the *VEL* bar showed somewhat more tendency to soften and disintegrate than the soaps. While there is no particular reason for using the product in soft-water areas, it may be quite useful in hard-water areas where synthetic detergents have certain advantages over soap.

In the making of the customary milled toilet soap, modern chemistry has enabled the soap manufacturer to use many kinds of fat or to combine several kinds to achieve a high-quality, uniform product. It is worth bearing in mind, however, that soap made from coconut oil and similar fats is more effective in securing high lathering power in hard water than soaps made from fats of tallow, which have a higher molecular weight. On the other hand, it is generally agreed that soaps made from tallow are milder to the skin than soaps made from coconut oil.

The ability of soap combined with water, preferably soft, warm water, to cleanse the skin is generally taken for granted by the average user. There is, however, no complete agreement among scientific investigators on how and why soap works the way it does on the human skin. It is, however, held by one authority that the action is a complex one which involves lowering the surface tension of the water and bringing it into more intimate contact with the skin so that it penetrates between the particles of soil and the skin, emulsifies any greases or oils that may be present, holds the particles of dirt in suspension, and thereby enables them to be rinsed away in the water. Some difficulties have been experienced by users of soap who report mild irritation from its use, but one authority estimates that at least 95 percent of soap users do not need any special kind of soap.

In earlier days the theory was that alkaline quality of soap was a measure of its washing ability. This view, however, is no longer held, and the development of a neutral soap which contains little or no excess free alkali has undoubtedly been a factor in reducing the number of skin irritations from use of soap. In order to counteract possible irritation, some soaps have been superfatted by the addition of petrolatum, lanolin, fatty alcohols, stearic acid, and waxes. Competent dermatologists, however, have held that this superfatting action interferes with the cleansing action of the soap. The most effective procedure is probably to wash with soap and then apply lanolin cream for skin-softening or lubricating effect. In addition to cleansing power, soap and water have some germ-killing properties, as evidenced by the scrubbing-up procedure required of surgeons before performing an operation.

In the earlier days of soap-making, manufacturers were accustomed to use the finest natural raw materials for making a top-quality product. Today, however, high quality is achieved with a wide variety of non-edible (lower quality) fatty materials. According to one study, at the beginning of the century good toilet soap was based on the use of coconut oil and finest beef tallow with or without the addition of olive oil. Since 1945, however, such substances as distilled bone grease fatty acids, tallow fatty acids, and distilled palm kernel fatty acids are characteristic constituents found in the commercial soap kettle. The subject is of interest at the present time because the United States again seems to be faced with the problem of producing consumers' goods in an economy geared to production of war materials. In World War II, soaps were debased in quality on orders of government control officials, and it is not possible to forecast at the present time just what raw materials will be available and how long soap manufacturers will be permitted to maintain the present quality of their production.

While the best toilet soap is a pure, neutral, mildly perfumed product, there are always attempts to add a unique quality that gives the advertising copywriters a new angle and the sales department an opportunity to sell a common household product at a fancy price. Sometimes these specialties turn out to be good toilet soaps. The well-known brand *Lifebuoy*, for example, found to contain phenolic compounds which give it a "clean hospital odor," met specifications for milled toilet soap in CR's current test. Routine or daily use of any product containing phenol is, however, considered

undesirable. Another special soap which is used by dermatologists in treating certain skin conditions is *Lava*. For some users, this product no doubt has its proper place, but it failed on four counts to meet Federal Specifications for toilet soap and is therefore rated as *Not Recommended* for general use.

Another special type of soap is represented by *Packer's Tar Soap*, which turned out to be a first-class product, so far as the soap base goes. On the other hand, some people, according to the noted specialist Dr. Theodore Cornbleet, are sensitive to tar even when present in small concentrations, and dermatologists are not agreed on the usefulness of the addition of tar to toilet soaps. In general, the use of tar as a constituent of soap would seem to be open to the same sort of objection as is raised against the use of phenolic substances in such a soap as *Lifebuoy*, for according to the U. S. Dispensatory the constituents of pine tar are largely phenolic; they include naphthalene, paraffin, phenol, cresol, and a number of other substances.

Something really new in the soap field is represented by *Dial Deodorant Soap*. The formula was developed as the result of wartime use of chlorinated phenol compounds which exhibited rapid antibacterial action on first exposure and cumulative effect with repeated use. The compound hexachlorophene, AT-7 [bis-(3.5.6-trichloro-2-hydroxyphenyl) methane], incorporated into a toilet soap, was found to reduce the number of bacteria resident on the skin, and, when that soap was used exclusively as a skin cleansing agent, it provided a protective film of antibacterial substance. The Committee on Cosmetics of the American Medical Association has taken the position that the use of this type of soap is more effective in controlling the odor of perspiration than other kinds of soaps, but noted that it did not provide complete protection in such cases. For practical purposes, the Council held hexachloroethane was non-irritating in the one percent to three percent concentrations commonly employed, although it warned that the substance had been in use for too short a time to evaluate its sensitizing and possible toxic properties. *Dial* soap, however, failed by a small amount on one count to meet Federal Specifications in CR's current test. Its coconut oil content was over 20 percent so that its composition is not to be considered as that of a toilet soap of the most desirable sort.

It is a tribute to the American system of mass production that high-quality toilet soap is available at a low price. As CR subscribers are well aware from the listings which show in parentheses after the price per cake what the consumer actually pays per pound for the soap on a dry basis, price is no guide at all to soap quality. The most expensive soap was one of the poorest tested, whereas one of the cheapest soaps was one of the best.

The accepted standards for evaluating soap are set forth in Federal Specifications for Milled Toilet Soap P-S-621a, and CR has in previous years tested a number of well-known brands for conformance with these Specifications. In view of the irritating properties of coconut oil, no soap which contained coconut oil in excess of 20 percent of the total oil or fat content has been given an *A-Recommended* rating. Although the Federal Specifications do not set any limits for free fatty acid, the U. S. Pharmacopoeia has set a limit of 0.23% (calculated as oleic acid) for hard soap (Sapo Durus), and when soaps currently tested had a fatty acid content greater than this, that fact has been indicated in the listings.

Prices are those actually paid for the soap samples purchased for test in the summer of 1950. No doubt there have been increases, but the comparative price relationship probably remains about the same.

Ratings are cr51.

A. Recommended

Although the following 7 brands met the requirements of Federal Specifications for Milled Toilet Soap (P-S-621a), they contained, with the exception of *Packer's Tar Soap*, coconut oil in amounts varying from 10 to 20% (approximately) of their total fat content. People with sensitive skins may experience some dryness or other discomfort from using these brands and may prefer to use one of the shaving tablets that CR has previously recommended, such as *Williams Shaving Mug Soap*.

Bridal Bouquet French Milled Toilet Soap (J. Eavensen & Sons, Div. of Wilson & Co., Inc., Camden, N. J.) 6c per cake (29c per lb. of dry soap). 1

Camay (Procter & Gamble, Gwynne Bldg., Cincinnati) 8c per cake (36c). Free fatty acid content, slightly above the generally accepted limits for toilet soap. 1

Cashmere Bouquet (Colgate-Palmolive-Peet Co., Jersey City, N. J.) 8c per cake (35c). 1

Palmolive (Colgate-Palmolive-Peet Co.) 8c per cake (35c). Free fatty acid content, slightly above accepted limits. 1

Swan Floating Soap (Lever Brothers Co., 505 Park Ave., New York City) 8c per cake (26c). 1

Woodbury Facial Soap (John H. Woodbury, Cincinnati) Bath size, 10c per cake (34c). Free fatty acid content, slightly above accepted limits. 1

Packer's Tar Soap (Packers Tar Soap, Inc., Mystic, Conn.) 23c per cake ($1.33). Free fatty acid content above accepted limits. Coconut oil content, not over 5%. 3

B. Intermediate

In the present tests, *Dial* and *Lux* fell slightly below Federal Specifications P-S-621a on one requirement as noted. *Lifebuoy* met specifications and contained only a small percentage of coconut oil, but was found to contain phenolic compounds. The other brands met the Federal Specifications, but contained 25% or more coconut oil.

Ivory (Procter & Gamble) 5c per cake (26c). 1

Kirkman Complexion Soap (Kirkman & Son, Div. of Colgate-Palmolive-Peet) 6c per cake (29c). 1

Lifebuoy Health Soap (Lever Brothers Co.) 9c per cake (40c). Contained phenolic compounds, which are considered undesirable in a product for constant or routine use. Coconut oil content, not over 10%. 1

Lux Toilet Soap (Lever Brothers Co.) 8c per cake (36c). Very slightly exceeded maximim limit for matter insoluble in water. Free fatty acid content, slightly above accepted limits. Coconut oil content, not over 15%. 1

Sweetheart Skin Charm Toilet Soap (Manhattan Soap Co., 441 Lexington Ave., N.Y.C.) 8c per cake (39c). 1

Dial Deodorant Bath and Toilet Soap (Armour & Co., Chicago) 19c per cake (73c). Slightly exceeded maximum limit for matter insoluble in water. Free fatty acid content, slightly above generally accepted limits for toilet soap. Coconut oil content over 20%. 2

Sayman Vegetable Wonder Soap (Sayman Products Co., St. Louis) 15c per cake (86c). One of the three brands having the highest percentage of coconut oil of all brands tested (nearly 100% of the fatty acid content). Free fatty acid content, considerably above accepted limits. 2

C. Not Recommended

The following brands failed to meet Federal Specifications P-S-621a on one or more requirements.

Hershey's Cocoa Butter Toilet Soap (Hershey Estates, Hershey, Pa.) 7c per cake (36c). Exceeded maximum limit for unsaponified saponifiable matter (free fat). Coconut oil content, over 20%. 1

Lava Soap (Procter & Gamble) 9c per cake (37c, but 55c if the content of soap alone is considered, on an hydrous basis). Failed to meet Federal Specifications P-S-621a on four requirements. Free fatty acid content, considerably above generally accepted limits for toilet soap. One of the three brands containing the highest percentage of coconut oil (nearly 100%). 1

Botany Superfatted Lanolin Soap (Distributed by Botany, Passaic, N. J.) 25c per cake ($1.21). Greatly exceeded maximum limit for unsaponified saponifiable matter (free fat). Free fatty acid content, above accepted limits. Coconut oil content, over 20%. 3

Conti Olive Oil Castile Soap (Conti Products Corp., merged with J. B. Williams Co., Glastonbury, Conn.) 23c per cake ($1.05). Found to contain rosin. Coconut oil content, not over 5%. 3

Original Physicians' and Surgeons' Soap (The Physicians' Supply Co., Cincinnati 2) 20c per cake ($1.43). Greatly exceeded maximum limit for unsaponified saponifiable matter (free fat). Free fatty acid content, much above accepted limits. One of three brands of the soaps tested containing highest percentage of coconut oil (nearly 100%). 3

Yardley Old English Lavender Soap (Yardley, 620 Fifth Ave., N.Y.C.) 45c per cake ($2.50). Exceeded maximum limit for matter insoluble in water. Free fatty acid content, above generally accepted limits for toilet soap. Coconut oil content, not over 15%. 3

Two Utility Tables

OFTENTIMES a need arises for a table that would be used frequently to carry small items, or food from place to place in the house. The two utility tables tested recently were found to be handy for this purpose.

***Left to right:** Utilatable, Cosco Utility Table.*

A. Recommended

Cosco Utility Table (Hamilton Mfg. Corp., Columbus, Ind.) $6.95 in Zone 1, $7.75 in Zone 2. A reasonably-priced, 3-shelf, all-metal table with 2-in. casters, suitable for holding medical, nursery, laundry, or other household supplies, or helping in the serving of a meal. The table is 30 in. high; there are 2 shelves, 15 x 21, below the top, which is 16 in. x 22 in. The *Cosco* is suitable for use indoors on smooth, one-level floors. The casters, however, are not large enough and do not roll easily enough to permit easy movement over rough uneven surfaces (the same is true of the *Utilatable*). The table, shipped in parts, can be put together in about 10 minutes. It was found to be well designed, of rigid, sturdy construction and is well finished in baked-on enamel in yellow or red, with white trim, or all white.

Utilatable (Lennox Metal Mfg. Co., Maspeth, L.I., N.Y.) $7.95. This table is quite similar to the *Cosco* in general appearance and utility; its height, however, is 33¼ in., and the top surface covered with a linoleum composition and edged with stainless steel measures 16 in. x 22 in. (the 2 lower shelves are of enameled metal and measure 14¼ in. x 20¼ in.). The time to assemble the table was about 15 minutes, somewhat longer than for *Cosco*.

Clinical Thermometers

A CLINICAL THERMOMETER, such as shown in Figure 1, to measure the body temperature is a necessity in every home, for one of the most important indications of illness is the changing of the body temperature from the normal. The normal body temperature is not the same for all individuals, but for most adults the body temperature will fall between the limits of 98.2 and 98.9 degrees with a generally accepted normal of 98.6°F. An inaccurate thermometer is worse than useless since it may give one a false sense of security when the attention of a physician is really required, or, on the other hand, may cause unnecessary alarm when the temperature is really about normal. The Food and Drug Administration has made the statement, in this connection, that many clinical thermometers are inaccurate, and on that account might in some uses endanger the lives of sick persons; the manufacturers were notified to check up, as it is their acceptance or rejection of thermometers from their production that determines the quality received by the consumer at the drugstore. The "certificate of accuracy" which usually accompanies clinical thermometers is not a true certificate as it purports to be, and, as will be seen, is not a reliable indication of the accuracy of the thermometer (see Figure 2).

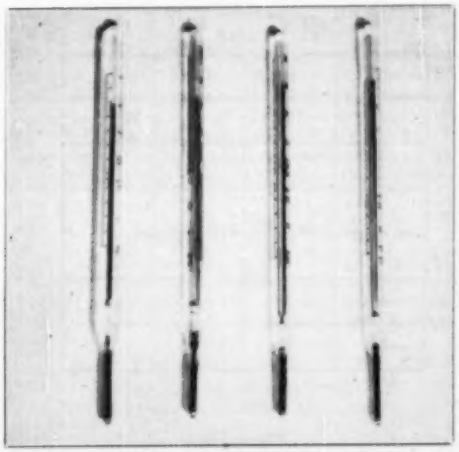
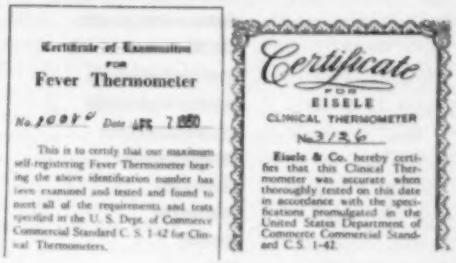


Figure 1 — Clinical Thermometers After Test

Left to right: *B-D "No. 150 Flat," flat style; easy to find and read the mercury column. Taylor "Instanta"; the lines and their color change sides to mark off clearly the normal body temperature. Kaye "Oral," typical of the usual style of oral clinical thermometers; rather difficult to read. Ex-Ell "Seal-Craft"; note loss of readability of graduations due to removal of pigment from markings in the test.*



Certificate of Examination
FOR
Fever Thermometer

No. 1091 Date APR 7 1950

This is to certify that our maximum self-registering Fever Thermometer bearing the above identification number has been examined and tested and found to meet all of the requirements and tests specified in the U. S. Dept. of Commerce Commercial Standard C. S. 1-42 for Clinical Thermometers.

Certificate
OF
EISELE
CLINICAL THERMOMETER
No. 3156

Eisele & Co. hereby certifies that this Clinical Thermometer was accurate when thoroughly tested on this date in accordance with the specifications promulgated in the United States Department of Commerce Commercial Standard C.S. 1-42.

Figure 2

The portions of the "certificates" shown above are examples of the types of certification that commonly accompany clinical thermometers; the one shown on the left (Ex-Ell) came with a thermometer that failed on permanence of pigment in the graduations. The "certificate" on the right came with a thermometer that was a retreater. Not all certificates are so explicit as these, but regardless of content, they supply no assurance that a thermometer will pass the tests. The manufacturer's "certification" is apparently a routine process, so that the document accompanying one's new clinical thermometer has no particular relation to the way the thermometer will perform in an actual test conducted by a qualified thermometer laboratory.

In the present test, only 3 thermometers were faulty in not giving correct temperature readings; one of the three had a separated mercury column, the other two were "retreaters." The clinical is a type of thermometer known as a "maximum thermometer" in which the mercury should remain at the highest reading reached until shaken down. In a retreater, the mercury column falls back and does not hold the highest reading. This defect can be checked for by the individual at home by placing the thermometer in a glass of water at about 103°F., holding it in a vertical position with the bulb well immersed. Allow the height of the mercury column to become constant; take a reading; remove it from the water and read again. If the reading drops more than 2/10 of a degree (generally one scale division) the thermometer is probably to be classed as a retreater. This should be repeated several times to be sure, as the defect may show up in one trial and not another. Tests for accuracy of reading at a given temperature cannot be made at home, as they require elaborate and expensive apparatus. In some places, however, thermometers certified by a state government agency may be obtained for an additional cost.

An important factor in choosing a clinical thermometer is the ease with which it can be read. This will depend on the design, method of marking, and permanence of the pigment with which the graduations are filled to make them easily readable. If

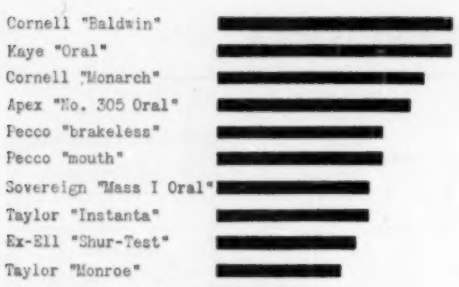


Figure 3

The bar graph shows a combined evaluation in arbitrary units of price and quality, to show quickly and approximately the relative value per dollar of cost of the 81 thermometers tested. The greater the length of the bar the better the quality for the amount spent. It will be noted from the listings and this graph, as from Figure 4, that the best thermometers were also, generally speaking, the cheaper ones.

a thermometer is difficult to read, it will often happen that the inexpert user will read it inaccurately.

Some points to remember when using a clinical thermometer are:

1. The thermometer should be clean. A thermometer should be sterilized before and after use, to prevent transfer of infection, with grain or other alcohol (ethanol), and rinsed thoroughly with clean cold water. (*Never hot water*, as breakage is almost certain to result.)

2. It should be shaken down below 97°F before use. The body temperature should not be taken for at least 30 minutes after exercising, eating, drinking, or smoking.

3. Insertion time should be three minutes or more for the oral type and four to five minutes or more for the rectal type, and the reading after that time should be taken in a good light to prevent error in reading.

The thermometers reported in this BULLETIN were checked for compliance with Commercial Standard CS1-42, and included tests for *accuracy*, *permanence of pigment*, "*hard shaking*" (difficult to shake down), *susceptibility to entrapment of gas* (bubble of gas in bulb, or interrupted mercury column), and *retreating index* (failure of the mercury column to remain at the maximum position reached, within acceptable limits). The thermometers are rated on the basis of the relative quality of the samples tested and the ease of reading. A sketch of the over-all price-quality relationship of those tested is given in the accompanying bar chart and graph, Figures 3 and 4. A brand of thermometers received an *A-Recommended* rating when all samples of that brand that were tested passed all tests; those given a *B-Intermediate* rating had defective samples or other unsuitable qualities, but the percentage of such faults was low. (Any individual thermometer in the *B* group in the brand tested may have been above or below *B. Intermediate* in quality.) The number of samples tested followed by the number that were rejected, if any, and the points on which they failed are given for each brand at the end of the listing.

An examination for ease of reading showed that all brands except one were of the design which is somewhat difficult to read because of the necessity of rotating the thermometer until the mercury column is magnified. The exception was the *B-D "No. 150 Flat"* which was of a design to permit easier reading (see Figure 1). The *Eisele "Redet"* and the *B-D "Red Flash"* had red reflectors which made the mercury column look as though it were red in color and thus made more easily visible. All had arrows to indicate the "normal" temperature except the *Taylor "Instanta"*; on this, the lines and numbers changed sides at the normal temperature (desirable as a quick means of spotting the 98.6° point). All had the desirable feature of having different colors for the markings below and above "normal" except the *Pecco* "mouth," the *Pecco* "brake-less," and the *B-D "No. 150 Flat."* The thermometers were of the oral type unless otherwise noted in the listings.

Prices are those paid at the time the samples were purchased, and included cases except when absence of case is noted in the listing.

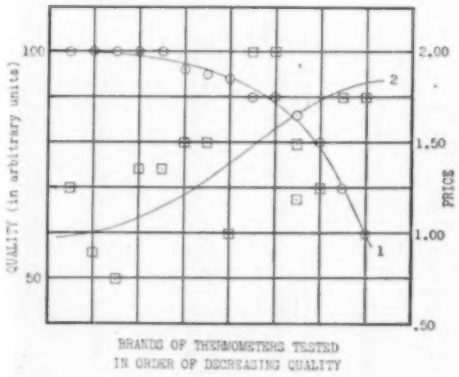


Figure 4

The diagram represents roughly the price-quality relationship of the samples tested. Although this can by no means be considered statistically reliable in view of the relatively small total number of samples tested, it is interesting to note that overall, the thermometers in this test were lower in quality as the price went up. ¶The circles of curve 1 show the brands of thermometers tested in order of decreasing quality, and the squares of curve 2 show the prices of the brands in the same order of brands from left to right.

A. Recommended

Cornell "Baldwin" (Cornell Instrument Co., 3314 Fulton St., Brooklyn 8, N. Y.) 89c. 5 samples tested. **1**

Kaye "Oral" (Kaye Thermometer Corp., 436 18 St., Brooklyn 15, N. Y.) 75c. No case provided. 5 samples tested. **1**

Apex "No. 305 Oral" (Faichney Instrument Corp., Watertown, N. Y.) $1.25. 5 samples tested. **2**

B. Intermediate

Cornell "Monarch" (Cornell Instrument Co.) $1. 5 samples tested, 1 rejected. Inking found to be slightly defective after permanence-of-pigment test. **1**

Pecco (Pecorella Mfg. Co., 1755 Bushwick Ave., Brooklyn 7, N. Y.) $1.35. No case provided. Rectal type. Rubber-stamped "brake-less" on box. Did not have different colors for markings below and above 98.6°. 4 samples tested. **2**

Pecco (Pecorella Mfg. Co.) $1.35. No case provided. Rubber-stamped "mouth" on box. Did not have different colors for markings below and above 98.6°. 6 samples tested. **2**

Sovereign "Mass I Oral" (E. Kessling, 682 Jamaica Ave., Brooklyn 8, N. Y.) $1.50. Had arrow on stem which showed correct orientation to make mercury column visible (desirable). 8 samples tested, 1 rejected. Slightly defective inking after permanence-of-pigment test. **2**

* * *

The following, though rated *B. Intermediate*, were less satisfactory than the other *B*-rated thermometers listed because of the nature of the fault of the individual thermometer in the group that was deficient in some way.

Taylor "Instanta" (Taylor Instrument Co., Rochester, N. Y.) $1.50. Lines and numbers changed sides at the "normal" temperature reading. 11 samples tested, 1 rejected. *Separated mercury column.* **2**

B-D "No. 150 Flat" (Becton, Dickinson & Co., Rutherford, N. J.) $2. Flat type, easy to read. Lacked different colors for markings below and above normal. 5 samples tested, 1 rejected. *Separated mercury column.* **3**

B-D "Red Flash" (Becton, Dickinson & Co.) $2. Had red reflector to make mercury column stand out more clearly. 5 samples tested, 1 rejected. *Crack in glass.* **3**

C. Not Recommended

Eisele "Redef" (Eisele & Co., Nashville, Tenn.) $1.75. Rectal type. Had red reflector to make mercury column stand out. Plastic knob on end of thermometer sealed the glass case. 5 samples tested, 2 rejected. *Retreaters.* **2**

Ex-Ell "Seal-Craft" (Ex-Ell Instrument Corp., 30 Delmonico Place, Brooklyn 6, N. Y.) $1.75. 5 samples tested, 5 rejected. All samples tested were unsatisfactory, because of defective inking after pigment test. **2**

Ex-Ell "Shur-Test" (Ex-Ell Instrument Corp.) $1.25. Rectal type. 4 samples tested, 2 rejected. *Separated mercury column*, slightly defective inking after pigment test. **2**

Taylor "Monroe" (Taylor Instrument Co.) Price varied; $1.19 and $1.49. 7 samples tested, 2 rejected. *Difficult to shake down*, slightly defective inking after pigment test. **2**

Soldering

MANY HOBBYISTS have a great interest in soldering, which is quite a difficult art, and if it is to be done well, requires a good deal of knowledge of a considerable variety of materials and important technical details about them. The National Bureau of Standards Circular (NBS Circular 492) entitled Solders and Soldering would seem to be about the last word on the subject. It is available from the U. S. Government Printing Office, Washington 25, D. C., at 15 cents and includes 12 pages of very concrete and useful information on all kinds of solders; fluxes used with soft solder, and hard solder; characteristics of soldered joints; soft and hard solders; and a bibliography on soldering in general. The pamphlet can be highly recommended to hobbyists who are interested in use of solder in a wide range of work at home, and to those who use solder professionally, for example in the physical laboratory, in radio and television work, or in jewelry making or model building.

Another study that would be of value to anyone interested in solder and soldering is available free of charge in England from the Tin Research Institute, Fraser Road, Greenford, Middlesex, and in the United States from the Tin Research Institute, Inc., 492 W. Sixth Ave., Columbus 1, Ohio. It is Notes on Soldering, by W. R. Lewis, 1948, 88 pages, well illustrated, with one-page bibliography. This should be of particular value to any manufacturer or research organization doing soldering on a considerable scale or under unusual conditions or requirements, or with mass-production methods.

Consumers' Digest — A New CR Service

CONSUMERS' DIGEST which summarizes each month two or three of CR's leading reports from the current issue is meeting with a good reception. Designed primarily for local newspapers, church, fraternal, and employee publications, it presents in non-technical language the important points and includes the favorable ratings of CR's findings on products by brand name. The release of three or four pages is mimeographed and is mailed first class so that its arrival coincides with the appearance of the issue on the newsstand.

The subscription rate is $1 a year, and the information may be used for publication providing the customary credit is given. (In the interests of economy, all subscriptions run from January through December.) Some copies are still available of the January and February releases, and we shall be happy to enter additional subscriptions to the new service on receipt of remittance.

Winter Gasoline

GASOLINE has been omitted from CR's testing schedule for the past two or three years for two reasons: there has been a notable lack of subscriber interest in the subject, presumably because the consumer has become aware that the differences between gasolines of various makes are relatively unimportant, and so buys his motor fuel at some service station that is convenient to his home or place of business. When he is on the road, he will likely fill his tank with gasoline of the same brand as he has been accustomed to buying in his home town. Differences in performance between most of the gasolines of well-known brands have been so slight that an automobilist would rarely be able to detect any practical difference in their performance in his car, unless, of course, in so far as his car may be one of those, such as the *Oldsmobile* or *Packard*, which the manufacturer has designed to work satisfactorily only on a premium gasoline of high octane value, and has so stated in his literature or by advice to users through his dealers.

To check on this question of differences between brands, CR has had tests made of 15 samples of winter grade gasoline distributed in a very large mid-western city. Twelve were regular grade; four of those were cut-price gasolines; three were premium gasolines, and two of those were cut-price brands.

The tests made included determination of the distillation range, octane numbers by the two accepted and widely-used methods (the "Research Method" and the "Motor Method"), vapor pressure, gravity, sulphur content, doctor test, corrosion, acidity, copper dish gum, existent gum, potential gum, and oxidation stability.

A good regular gasoline should have an octane rating of not less than 80 by the "Research Method" and not less than 76 by the "Motor Method." The "Research Method" octane number gives an indication of the performance of the gasoline under ordinary road conditions, the "Motor Method" under conditions of "high stress" (corresponding to heavy-load and severe driving conditions). The difference between the two ratings is usually about 5 to 6 octane numbers, but when this difference is small, it is an indication that the composition of the gasoline may not be such as to assure the best performance in operation. Premium gasolines differ from regular gasolines chiefly in their higher octane number. This should be about 86 minimum by the "Research Method." All of the regular and two of the premium gasolines met the stated requirements.

The A.S.T.M. (American Society for Testing Materials) recommend a maximum vapor pressure of 15 pounds per square inch for mid-winter operation in such states as Illinois, Kansas, New York, New Jersey, etc. CR considers this much too high, and holds that the vapor pressure of a motor fuel for winter operation should not exceed 12 pounds at any time. All of the premium gasolines were satisfactory in this respect, but the vapor pressure of five of the regular-grade samples was too high; this would correspond to a tendency to cause vapor lock or difficulty in restarting a stalled engine.

The sulphur content of a gasoline should be very low (in our opinion, not greater than 0.10 percent). If sulphur is present greatly in excess of this amount, enough sulphuric acid is likely to be formed to contribute to corrosion and shorten the life of the engine. Only three brands of the gasolines tested had a sulphur content in excess of 0.10 percent, and they were only slightly above that figure.

Except for rather high gum content of one brand, the gasolines satisfactorily passed the remainder of the tests.

It is a reasonable inference from the results that in normal gasoline markets, any well-known brand will be a pretty good product, and the differences that do exist between brands at this time are likely to be of minor importance.

CR, however, recommends the purchase of regular-grade gasoline in preference to premium-grade, whenever possible, provided, of course, the regular grade can be used without serious pinging or knocking of the engine. (As already noted, there are a few makes of cars, expecially those of very recent manufacture, which have compression ratios so high as to require that premium gasoline be used exclusively.) In the following listings of gasoline bought in a Midwestern big city, the octane number as obtained by the "Research Method" is given first, followed by the octane number by the "Motor Method" in parentheses. The prices of the regular and premium cut-price gasolines were 1½ cents and 2 cents, respectively, below the regular market price.

Regular Grade

A. Recommended

Conoco. Octane No. 82 (78).
Perfect Power. Octane No. 84 (78). A cut-price gasoline.
Sears Roebuck. Octane No. 83 (79). A cut-price gasoline.
Sinclair. Octane No. 83 (78).
Socony Vacuum. Octane No. 82 (78).
Texaco. Octane No. 84 (78).

B. Intermediate

Cities Service. Octane No. 83 (78). Vapor pressure, somewhat high.

Connery's. Octane No. 82 (80). A cut-price gasoline. Gravity, somewhat high. Distillation range indicated a "recycled" gasoline.[1]

Martin Oil Service. Octane No. 80 (79). A cut-price gasoline. Vapor pressure and gravity, somewhat too high. Distillation range indicated a "recycled" gasoline.[1]

Phillips Petroleum. Octane No. 84 (79). Vapor pressure and gravity, high; this gasoline also had an unusually large percentage of highly volatile constituents present, which might result in lower than normal gasoline mileage.

[1]Recycled gasoline is obtained from distillate wells in the Southwest; it contains no cracked products and has not been processed by conventional refinery methods.

Shell. Octane No. 83 (78). Vapor pressure, somewhat high.

Standard of Indiana. Octane No. 83 (78). Vapor pressure, slightly high.

Premium Grade

A. Recommended

Sears Roebuck. Octane No. 90 (82). A cut-price gasoline.

Standard of Indiana. Octane No. 89 (82).

B. Intermediate

Connery's. Octane No. 85 (82). A cut-price gasoline. Gravity, somewhat high. Distillation range indicated a "recycled" gasoline.[1]

An Electric Floor Polisher

THE *Hoover Floor Polisher* has been found to be a useful appliance for the consumer who has a considerable amount of floor area to keep waxed and polished.

This machine has two brushes, 5½ inches in diameter, driven by an ac-dc motor. In addition, a pair of felt buffing pads and a pair of lamb's wool buffers are supplied; both are fastened to the brushes with snap buttons. In CR's tests, the *Hoover* was considered easy to operate although there was a slight tendency for it to "walk" to the right in use.

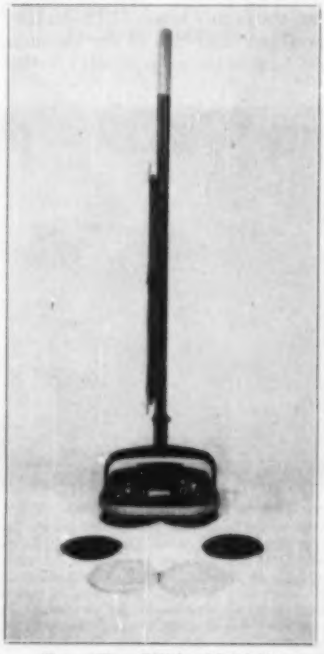
The tests made on this appliance included electrical leakage (electric current that flows through the insulation to produce a possible shock hazard, increasing with the amount of current flowing), proof voltage (breakdown), power input, radio interference, and effectiveness in polishing.

The appliance is for polishing only, and should not be utilized for scrubbing floors, because of the possible danger of shock where there are conditions involving use of water in connection with the appliance.

Two other floor polishers previously tested and reported by CR are the *Regina Electric Floor Polisher* (CR's January 1948 BULLETIN) and the *Vactric Electric Floor Polisher* (May 1949 BULLETIN). Both of these received an *A-Recommended* rating. Rating is cr50.

A. Recommended

Hoover Floor Polisher, Model 021 (The Hoover Co., Ltd., Hamilton, Ontario, Canada) $70. Weight, 12.8 lb., about a pound lighter than some of the lightest upright vacuum cleaners. Length of cord, about 20½ ft. Power input, 212 watts at 115 volts a.c., when under load. Radio interference was objectionable. Effectiveness in polishing, very good. Works up to about ¼ in. from a wall or similar obstruction. A-c leakage current, .45 ma. (satisfactorily low). Passed voltage breakdown test. 2



Hoover Floor Polisher Model 021

Household Synthetic Detergents

SYNTHETIC DETERGENTS are becoming increasingly popular, and it is believed that about a third of the quantity of cleansers used by Americans in 1950 were synthetics. For the most part, the synthetic detergents come in powder form, although a few of them are liquids. Aside from the fact that synthetics have definite advantages in washing in hard water, their good performance in washing dishes, and glassware in particular, has a good deal to do with their popularity. The liquid detergents, *Glim* and *Joy*, included in this study, are intended primarily for dishwashing, although they can also be used for washing woolens and fine fabrics and for general household use. In the study reported, these two detergents were evaluated to give an indication of their relative value for dishwashing by washing standard soiled glass microscope slides.

The products *Cheer*, *Fab*, *Surf*, and *Tide*, which are heavy-duty detergents intended for use in home laundering and for heavy-duty household tasks, were evaluated by washing two different kinds of standard soiled cotton cloths in both hard and soft water. *All*, another heavy-duty synthetic, is also intended for the family wash, and especially for use in home washing machines of the automatic type.

The Atlas Launder-Ometer

This laboratory washing machine rotates twenty jars end-over-end in a water bath of fixed temperature. In each jar are standard soiled cloths, clean cloths, wash solution, and monel metal balls to provide "load." The relative detergent action of the heavy-duty detergents was tested by this method.

The method does not reproduce the conditions in home laundry equipment, but it does serve effectively to compare different detergents, since they are run simultaneously, with identical specimens of the standard soil cloth.

With automatic machines, excessive foam has been a serious problem, because heavy suds blanket the washing action and result in poor mechanical action and, hence, poor cleansing of the fabrics. *All* does not foam much and is intended to avoid this difficulty. Since it is sold especially for use in automatic washers, additional tests of *All* were run in a *Bendix* automatic washer and the results compared with test washings run in the *Bendix* automatic washer using *Tide* for comparison.

During the last several months, the makers of several of the heavy-duty synthetics have been advertising that the detergents do not need to be rinsed from garments or other textiles after washing. CR thinks that this advice must be questioned, as was noted in CONSUMERS' RESEARCH BULLETIN for August 1950, for omitting the rinsing operation will leave some soil and residues of detergent on the cloth. Consumers' Research has been comparing this washing method with the conventional wash-and-rinse method. (Soft water — average hardness about 50 ppm. — was used.)

Fabrics of the test garments include woven nylon, woven and knit rayons, and woven and knit cottons. Half the garments in the test are worn and then washed and rinsed in an agitator-type automatic washing machine, then dried in an electric clothes dryer. Garments in the other group are worn, and washed in the same washing machine; garments in the second group are not rinsed, but are dried in the same dryer. This test has now been in progress for seven months, and the garments have had from 55 to 65 wearings and washings; final results, however, are not yet available. A tabulation of comments of 20 persons asked to judge the garments with respect to appearance and feel showed that the larger number of observations on the 20 garments indicated no appreciable difference in appearance and feel between the garments that were rinsed after washing and those that were not. An examination of the tabulated comments expressing observers' judgments of differences between the garments showed that (1) when the examination was done by artificial light, most of the comments favored the rinsed garments, and (2) when the examination was done by natural light on a bright day most of the comments favored the garments that had not been rinsed. When clothes are washed with a detergent containing fluorescent dye, as in this test, judgment of the whitening effect of the detergent is bound to be affected by the character of the light used to examine them. Little effect from the dye can be observed in artificial

light, which gives off light chiefly in the visible range. With daylight, the effect would depend primarily on the brightness of the sky and whether there are clouds or haze.

From the results to date it does appear that a family wash that would be satisfactory to most persons can be turned out without rinsing, when certain of the synthetics at least are used. (Soap would not be satisfactory because of the likelihood of yellowing and scorching.) There is no doubt that the saving in time, labor, and hot water, when rinsing is not done, is a real one, and one that may be attractive to some housewives. There may, however, be noticeable deterioration of the appearance and feel of some of the fabrics when they are not rinsed. Possibly the end result of a housewife's trying the no-rinse method will be that, while she may find rinsing is desirable, she may not need to rinse as often or with as much water as she has been accustomed to use. On the whole, this will be a beneficial result, since any extra handling of clothes in washing and rinsing tends to increase deterioration through strain and wear.

Chemical analyses of the heavy-duty detergents are presented in brief form in the table. Readers who are interested will recall CR's warning that the compositions of detergents change frequently because of their manufacturers' uncertainties as to the best formulations for their purposes and for other reasons, and hence results valid today may not apply a few months later. A comparison of the analyses of detergents in this table with those which appeared in the August 1950 CONSUMERS' RESEARCH BULLETIN will be of interest in this connection. For example, the amount of synthetic detergent in *Fab* was increased.

The percentage of synthetic detergent present in the products is considered satisfactory in all cases. Readers should remember that when "builders" are used with synthetic detergents the combination may often give better detergent action than the synthetic alone possesses. Sodium tripolyphosphate and tetrasodium pyrophosphate are among the builders that are especially effective in promoting cleansing action on cotton. Silicates and carbonates are other builders that are useful in dirt removal and act as water softeners. Sodium carboxymethylcellulose ("CMC") is an anti-graying agent added to reduce the tendency of loosened soil to redeposit on the fabric and thus to diminish the tendency of the cleansed portions to acquire a grayish tone.

All the heavy-duty detergents included in the study contained optical bleaches or whitening agents, which are actually fluorescent dyes. These dyes make clothes look whiter by translating invisible ultraviolet light into a visible bluish light which tends to overcome the yellowish color that is so commonly noticed after laundering.

In the listings, prices per ounce are given in parentheses for each product to permit convenient comparisons of cost. Prices given are those current at the time this article was written.

Liquid Detergents

A. Recommended

Joy (Procter & Gamble, Gwynne Bldg., Cincinnati 1)

Chemical Analyses of Heavy-Duty Detergents Tested

Product	Identification of Detergent	Detergent %	Sodium Sulfate %	Sodium Carbonate %	Sodium Chloride %	Sodium Phosphates %	Sodium Silicates %	CMC %	pH of 1% Solution
All	(1)	20	—	21	—	pyro 39*	—	—	—
Cheer	(2)	25	17	1	4	di 2.2 pyro 31 tripoly 7.5	4.5	0.4	9.9
Fab	(3)	40	24	4.8	.03	tri 9	10	0.5	10.2
Surf	(2)	37	9**	—	—	di 4 pyro 33 tripoly 3	—	0.7	9
Tide	(4)	20	15	1.4	0.5	di 6.7 pyro 14.6 tripoly 27.8	3.8	0.5	10

(1) polyoxyethylene ether
(2) alkyl aryl sodium sulfonate
(3) keryl benzene sodium sulfonate
(4) sodium salt of sulfated alcohols
* also starch, 15%
** also magnesium sulfate, 5%

32c for 6 fl. oz. (5.3c). Washing effectiveness on standard soil glass test strips, relatively good in both hard and soft water. Estimated composition: triethanolamine lauryl sulfate, 52%; isopropanol, 24%; water, 24%; and small amount of perfume.

Glim (B. T. Babbitt, Inc., 386 Fourth Ave., New York 16) 29c for 6 fl. oz. (4.8c). Washing effectiveness on glass slides, somewhat less than *Joy* in soft water, but about the same as *Joy* in 20-grain (very hard) water. Estimated composition: trimethylphenol, ethylene oxide condensation product, 56%; isopropanol, 8%; water, 36%; and small amount of perfume.

Heavy-Duty Detergents

A. Recommended

Tide (Procter & Gamble, Gwynne Bldg., Cincinnati 1) 32c for 18 oz. (1.8c). Washing effectiveness on both types of cotton soil cloth, good in both hard and soft water. Good to fair in respect to amount of soil redeposited.

Surf (Lever Bros. Co., Cambridge, Mass.) 32c for 19 oz. (1.7c). Washing effectiveness on both cotton soil cloths, good in hard water, but rather poor in soft water. Good in respect to small amount of soil redeposited in hard water; fair in soft water.

* * *

All (Detergents, Inc., Columbus, Ohio) 39c for 24 oz. (1.6c). Washing effectiveness on cotton soil cloths, variable (poor on one; good to poor on the other). Good in respect to soil redeposited. For automatic washing machines, on the basis of tests made in a *Bendix* automatic washer, would warrant an *A-Recommended* rating.

B. Intermediate

Cheer (Procter & Gamble) 28c for 21 oz. (1.3c). Washing effectiveness: good to poor in hard water; good in soft water. Poor in respect to soil redeposited.

C. Not Recommended

Fab (Colgate-Palmolive-Peet Co., 85 Hudson St., Jersey City, N. J.) 32c for 18 oz. (1.8c). Washing effectiveness, relatively poor. Fair in amount of soil redeposited.

Moisture Problems in the Home

A VALUABLE BULLETIN for many home owners is the one entitled Moisture Problems in Homes, available from Purdue University, Lafayette, Indiana, and identified as Engineering Bulletin, Extension Series No. 70. This is a bulletin of 44 pages plus a bibliography of 13 items, well illustrated, showing the harm done to houses by excessive moisture and indicating also the numerous ways in which water vapor gets into the home.

Some of the sources of water vapor mentioned by the Indiana bulletin are: bathing, washing and drying clothes, mopping, cooking, washing dishes, unvented and improperly vented gas appliances, water vapor from the occupants of the home, in the form of perspiration, and the vapor carried out of their lungs in the process of breathing.

The illustrations, which are especially good, show very well the nature of the deterioration of woodwork, paint, and other parts of the home caused by excessive amounts of moisture and insufficient ventilation. The harm, of course, is particularly great during the winter months when the moisture vapor may alternately freeze and thaw within the walls and bring about drastic and sometimes fairly rapid deterioration of the wood framing and timbers.

The price of the bulletin is 25 cents, both to residents and non-residents of Indiana.

Another useful but considerably briefer treatment of the subject (6 pages, well illustrated) entitled What To Do About Condensation, Technical Reprint Series No. 6, published by the Housing and Home Finance Agency, is available from the Superintendent of Documents, Washington, D. C., at 10 cents; this points out that with small houses of the present day, and the tighter construction which is common, humidity indoors has tended to go up to quite high levels. Various means for reducing the humidity within a house, and for disposing of a part of that which is unavoidably present, are given. Incidentally, CR wishes to note for its subscribers' information that there are very few circumstances in which there will be any justification for *adding* humidity to the air of a home through a device designed for the purpose. The average home has too much rather than too little water vapor, during a good part of the year. For those who may have been using some sort of humidifying device connected with the heating system, and who may have trouble with condensation on windows and in the walls of the house during winter months, the following comment in the Housing and Home Finance Agency Bulletin will be of interest:

> The major sources of humidity should be removed. Certainly any humidifying trays or pans should be drained. Large amounts of laundry should be dried out-of-doors or in a well-ventilated space. If the humidity conditions are severely aggravated it may be necessary to ventilate the house with a controlled amount of replenishment weather air [i.e., on days when outdoor air is of satisfactory dryness — CR].

Safety Razor Blades

THERE ARE few products which offer the consumer such a large selection of brand names to choose from as do the safety razor blades, but in spite of this the number of manufacturers that offer uniformly sharp blades is disappointingly small. Even the better and more uniform brands may at times show mediocre and even poor performance. This may be no problem to some individuals who do not require a well-sharpened and honed blade for satisfactory shaving, but for others uneven quality can be exasperating.

The most important characteristic of a razor blade is its ability to produce a good clean shave, at a moderate cost per shave obtainable. Variations in shaving technique and preparation of the face for shaving have a bearing of course on the matter of getting a good, smooth shave and also on the lasting qualities of the blade.

The primary purpose in adequate washing and lathering of the face is to soften the beard hair which is chiefly of keratin, a highly complex organic protein. Keratin, though insoluble in water, absorbs water readily and so becomes less hard and tough. It has been found that the time required for softening the hair prior to shaving will depend on the temperature of the water, whether plain water or a soap solution is used and whether the beard contains gray or white hairs. Using water at a temperature of about 120°F and a sharp blade in a correctly designed razor, the time to soften the hair for the most satisfactory shaving conditions should be not less than three minutes (not less than five minutes for white or gray hairs). The best shaving technique, however, cannot compensate for the use of a dull blade.

The difficulty of obtaining a close shave increases when the period of preparation is inadequate, if the stiffness of lather is increased, as the effective shaving angle (about 30° between face and blade) varies, and as the blade becomes dull. The results will be more satisfactory if the skin is stretched to smooth the wrinkles and if the razor stroke is made against the direction of the hair growth. The razor should be rinsed frequently with hot water and both the razor and face kept constantly wet throughout the shaving.[1]

Best results from any blade can be obtained by honing and stropping it frequently. Even with a new and unused blade, stropping will usually produce a marked improvement in keenness. The cutting edge of a razor blade is very delicate, and in shaving the edge is bent over to one side or the other. Each time the blade is used for shaving without stropping or honing, this condition becomes more pronounced until finally there is a "wire edge." Such a blade has lost its keenness and will pull during shaving. The object in stropping is to bend the bent-over edge back in line. Stropping alone does not really sharpen the cutting edge, and after stropping has been continued a long time, the edge becomes rounded and dull.

* * *

In order to obtain a fair representation of each brand tested, packages of a given brand were purchased at different stores and, depending upon the uniformity of the blades, a number of blades from each package were tested. These blades were tested on an instrument designed by CR, which measures the degree of keenness of each edge and checks uniformity of blades. In operation, the blade is clamped into position, and the cutting edge of the blade, under a vertical load of about 25 grams, is moved back and forth at the rate of 50 complete strokes per minute over a strip of fine white paper especially selected because of its uniform quality and thickness. With correct load on the blade and the proper tension on the paper strip, a poorly sharpened or honed edge will cut through the paper in as little as a single complete stroke; a blade having a well-sharpened and honed edge may give 40, 60, even, in exceptional cases, considerably more than 100 complete cycles of movement before cutting through the thickness of the paper strip. The greater the initial sharpness, the longer the blade will take to cut through the white paper under the conditions provided. The principle is similar to that of a skate on new ice; if it is sharp, it makes only a noticeable track on the ice; if it is dull and nicked, its marking of the ice will be very evident and show scratching or gouging of the smooth surface.

The design of CR's testing device is such that at the instant the blade has cut through the paper an electrical contact is made between the blade and a strip of graphite-impregnated paper beneath the test paper; this acts through an electronic relay to cause the motion of the machine to be stopped. The instrument is quite sensitive to small differences in the keenness of the blades and readily measures the breakdown of the edge and its increasing roughness with successive shaves. It also shows the improved keenness produced when an edge has been stropped.

To check on the correlation of the instrument test results with performance of blades in use, 12 men of

[1]For a full discussion of the preparation of face and beard for shaving, see an article entitled Factors Involved in Satisfactory Shaving, by L. Hollander and E. J. Casselman, in the Journal of the American Medical Association for July 10, 1937, pages 95-101.

CR's staff, representing different types of beards, used these blades in their daily shaving. This correlation was found to be very satisfactory.

It should be remembered that blades, even of the well-known brands, continue to be of uncertain and non-uniform quality from time to time, and occasionally even in a given package. Sometimes the two edges of a single blade show wide variance in sharpness. Several of the blades tested would have received higher ratings were it not for their variability. Blades rated *A. Recommended* were found to be of relatively good quality, and uniform in performance. Should blades of a recommended brand be found not to give good performance, it will very likely be due to variations in the product, and the consumer's best recourse will then be to try one or another of the recommended brands until one is found that is satisfactory at the time.

Blades of the "private brands" sold by five-and-ten-cent stores have in the past proved unusually variable and on that account were not investigated in the present study.

Prices given in parentheses are per blade; price ratings are on a per-edge basis.

A. Recommended

Gillette Type

Barbasol (Barbasol Co., Indianapolis) (1.7c) 1
Craftsman Chrome (Sears-Roebuck's Cat. No. 9—9303) (2c) 1
Monaker (Monaker Razor Blade Co., Newark, N. J.) (1.2c) 1
Star Sealected (Star Div., American Safety Razor Corp., Brooklyn 1, N. Y.) (2.5c) 1
Craftsman Stainless (Sears-Roebuck's Cat. No. 9—9308) (4c) 2
Hoffritz Stainless (Hoffritz, 49 E. 34, New York 16) (6.7c) 3
Personna (Personna Blade Co., Inc., 43 W. 57, New York 19) (10c) (The mfr. recently announced a price cut to 5c each [5 for 25c] to be effective when distribution of new merchandise is completed.) 3
Silver Star (Star Div., American Safety Razor Corp.) (4.9c) 3

Other than Gillette Type

Craftsman Chrome (Sears-Roebuck's Cat. No. 9—9221) (2c) 2
Durham Duplex (Durham-Enders Corp., Mystic, Conn.) (8.6c) 3
Ever-Ready (American Safety Razor Corp.) (5.4c) 3
Personna Injector (Personna Blade Co., Inc.) (4.4c) 3
Schick Injector (Magazine Repeating Razor Blade Co., Bridgeport, Conn.) For *Eversharp Schick Injector Razor*. (3.6c) 3

B. Intermediate

Gillette Type

Berkeley (Consolidate Razor Blade Co., Inc., 26 Cornelison Ave., Jersey City, N. J.) (1.4c) 1
Gillette Thin (Gillette Safety Razor Co., Boston) (2.5c) 1
Ladd's Imperial (Hamilton Products Co., Inc., N.Y.C.) (2.5c) 1
Marlin (Marlin Firearms Co., New Haven, Conn.) (2.1c) 1
Master Cutler (Edwin Jay, Inc., 49 E. 34, New York 16) (2c) 1
Pal Hollow Ground (Pal Blade Co., Inc., 43 W. 57, New York 19) (2.2c) 1
Probak Junior (Probak Div., Gillette Safety Razor Co.) (2.5c) 1
Treet (Treet Safety Razor Corp., Brooklyn 1, N. Y.) (2.5c) 1
Wards Super Thin (Montgomery Ward's Cat. No. 53—4335) (1.5c) 1
Wards Stainless Thin (Montgomery Ward's Cat. No. 53—4338) (3.9c) 2
Gillette Blue (Gillette Safety Razor Co.) (4.9c) 3

Other than Gillette Type

Pal Hollow Ground (Pal Blade Co., Inc.) (2.2c) 2
Blue Star (Star Div., American Safety Razor Corp.) (3.3c) 3
Gem (Gem Div., American Safety Razor Corp.) (4.9c) 3
Pal Hollow Ground Injector (Pal Blade Co., Inc.) (3c) 3

Roasting Coffee at Home

GOURMETS who appreciate the difference between freshly roasted coffee and just any coffee as sold in the grocery stores, or vacuum-packed (tinned) coffee, will want to use coffee which is roasted no more than a few days before it is used. Those who cannot obtain freshly roasted coffee in the store because their town does not have a shop where coffee is roasted no more than a day or so before delivery to the consumer may be willing to roast their own in order to get the fine flavor of fresh coffee. There is no question that a fairly satisfactory job of roasting coffee may be done at home. Our forefathers did it, and great numbers of people do it today in Latin America. Green coffee beans can be stored for considerable time and then roasted with good results, but coffee that has been roasted retains its good flavor a week or two at most.

Various methods can be used. The work can be done with a skillet, but the chief problem is to keep the beans turning over and over so that each bean will be evenly browned. A better way of roasting coffee at home, according to CR's coffee expert, is to use an old-fashioned corn popper.

In using a corn popper, the best job is undoubtedly secured on an open flame of a gas burner. The skillet method is the most satisfactory technique to use on an electric range. The roasting

can also be done in an open vessel with use of a baking pan, but frequent attention is necessary to keep the beans stirred so that they brown evenly.

An appliance especially designed for roasting coffee is the *Burpee Imperial Family Coffee Roaster* sold by Thomas Mills & Bros., Inc., 1301 N. Eighth St., Philadelphia 22, at $15.25. This, according to the distributor, is to be filled with coffee, placed over a gas burner, and turned with a hand crank until the beans are roasted sufficiently. Unfortunately, the roaster is old-fashioned in appearance and it weighs about 15 pounds; thus it is not an appliance that would appeal to the modern housewife who expects her kitchen utensils to be attractive in design and light in weight.

There is no rule of thumb by which a consumer can tell when his coffee is roasted just right. That is strictly a matter of trial and error. It is important, however, to have good light to judge the color of the beans. Beans will, for instance, look darker and better done in the shadow and in a poor light than they will in adequate strong daylight. The consumer who is going to roast coffee for the first time would find it worth while to buy some commercially roasted coffee (unground), put it in his skillet or his popper, and jiggle it around in the light he is going to use when he does his own work. He can thus get an idea of how his coffee should look when it is done.

Roasting time will vary from about 8 minutes to 15 minutes, depending on the amount of coffee being roasted and the heat applied. Too high heat will burn some beans before others are properly cooked; too low heat will "bake" the coffee with some flavor loss (the flavor will be somewhat "flat").

When the roasting is finished, the coffee should be cooled as quickly as possible, otherwise the roasting process will continue, especially among those beans at the bottom of the container, and cause an uneven and unsatisfactory roast. If the corn popper is used, it should be shaken rapidly through the air. If a skillet is used, the coffee should be dumped into a sieve and poured rapidly from one container to the other. Whatever method is used, the main thing is to check the roasting process and cool the coffee quickly when it has attained the desired color.

Coffee is a rather delicate commodity with its own characteristics. If the coffee is allowed to "rest" (as Brazilians say) between the various operations of preparation of the green beans, you get certain desirable results in roasting and drinking qualities. Similarly, CR's consultant reports that he has found during 17 years of "cupping" (testing) a particular blend that there is an actual improvement in flavor during the 24 to 48 hours after roasting. The person roasting coffee at home would perhaps find a slight improvement in flavor if he allowed his coffee to "rest" one day after roasting.

Green coffee can be bought at 70 to 75 cents a pound from Bell Bates Co., 44 Dey St., New York 7, and can be obtained from Mannings, Inc., 901 Battery St., San Francisco 11, or from Manning stores in Seattle, Portland, San Diego, Los Angeles, and other western cities. In a good many large cities it will probably be possible to obtain green coffee from local coffee roasters or from wholesale grocers.

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†*indicates that listings of names or brands are included.*

Off the Editor's Chest

(*Continued from page 2*)

well as in those which are moderately priced. Paying a high price for a garment is no guarantee of its serviceability.

The particular fabrics just referred to are chiefly rayons of one type or another. That is the fiber to which consumers must turn for inexpensive and medium-priced garments, particularly. Thanks to our government crop-controllers, cotton is in scarce supply, and hence high-priced. Cotton textiles will be increasingly expensive. Wool prices are astronomical, and the government is expected to take a large chunk of the available supply for military needs. Man-made fibers other than rayon, such as nylon, Orlon, and Dynel, will be used to help ease the pinch on textiles, but rayon is considered the kingpin synthetic fiber, particularly in the women's field.

In order to peg quality of rayon textiles, specifications and standards have been evolved under the auspices of the American Standards Association for 50 items in common use, including fabrics for woven and knitted dresses, and underwear, men's woven suitings and knitted and woven underwear, household fabrics such as woven window curtains, draperies, and slip covers. Since the booklet setting forth the proposed standards runs to 160 pages, the principal points covered obviously cannot even be summarized in a paragraph or two. Moreover, the details are technical and chiefly of interest to production engineers and other textile experts in dyeing and finishing industries and manufacturers of "gray goods."

The consumer who buys a product in retail stores and from mail-order houses is mainly concerned with the practical *performance* of the thing she or he buys. Will it dry clean or wash satisfactorily? How badly will it fade from the sunlight, in washing, or in contact with perspiration? Will it show spots readily? Does it muss? What are its wearing qualities, its resistance to seam slippage?

These are a few of the questions that the trusting purchaser of rayon textiles takes for granted have been satisfactorily determined by her retailer before he offers a product for sale. It often comes as a rude surprise to find that some retailers regard themselves not as purchasing agents for the consumer, but as merchandising outlets for manufacturers, whether the products they make are shoddy or of good quality. Just why a dress manufacturer at any time turns out a garment that cannot be successfully cleaned by any method is quite incomprehensible to the average consumer.

In time of national emergency when every effort must be made to conserve manpower and materials for national defense, it is inexcusable for a manufacturer to spend materials and labor in the making of things that are not at all serviceable. Yet there was the case of a bright green dress, trimmed with black edging, backed at the pockets and down the front with a sleazy black material that crocked off when tested by a cleaner with a dry white cloth. "The girl who brought that dress paid good money for it," said the cleaner "And when I put it in the cleaning fluid the black from the backing material is going to run all through it and spoil the color. For what she paid she could have gotten a good dress."

General adoption of the rayon textile standards proposed by the American Standards Association will not eliminate such incidents entirely, for these standards are strictly voluntary, and producers, manufacturers, and finishers are entirely free to produce good-quality textile and garments or poor ones as they choose. On the other hand, if you make your purchases chiefly from stores which decide to buy so far as possible only such rayon garments and other rayon textiles as meet the A.S.A.'s standards and so advertise to their customers, you will reduce considerably your chances of obtaining rayons that give unsatisfactory performance.

Consumers who wish to take steps now to prevent a repetition of their unhappy and costly experiences with low-grade, shoddy, and generally unsatisfactory rayon textiles of OPA-World War II days should go to work on their local department and specialty stores to make certain that they ask their suppliers to adopt and follow the A.S.A. textile standards. Vigorous support can be given such a program by returning promptly every unsatisfactory rayon textile purchase with a clear and detailed description of the nature of the product's failure. Good stores, as a rule, have a consistent policy of making good on clearly defective or poor-quality merchandise. Other stores may need to be prodded by insistent and outspoken direct complaint which can be reinforced by bringing the matter to the attention of your local Better Business Bureau, Chamber of Commerce, or Retail Merchants' Association.

If enough irate women (and men, if their support can be enlisted) throughout the country make it plain, when the occasion arises, that they will not tolerate or waste hard-earned money on rayons that can't be cleaned properly, that fade badly in a short time, that do not have a satisfactory wear-life for the price paid, and take the offending item back for a refund, they will be performing a public service as well as helping to protect their own interests as consumers. Prompt, intelligent, and energetic action now will forestall the attempt to merchandise a flood of shoddy and low-grade rayon textiles later when the munitions program gets into high gear, with its inevitable down-grading effect on the production of goods for consumers.

RATINGS of MOTION PICTURES

THIS section aims to give critical consumers a digest of opinion from a wide range of motion picture reviews, including the motion picture trade press, leading newspapers and magazines—some 19 different periodicals in all. The motion picture ratings which follow thus do not represent the judgment of a single person, but are based on an analysis of critics' reviews.

The sources of the reviews are:

Box Office, Chicago Daily Tribune, Cue, Daily News (N.Y.), *The Exhibitor, Harrison's Reports, Motion Picture Herald, National Legion of Decency List, Newsweek, New York Herald Tribune, New York Times, Parents' Magazine, Release of the D.A.R. Preview Committee, Reviews and Ratings* by the Protestant Motion Picture Council, *Successful Farming, Time, Times Herald* (Washington, D.C.), *Variety* (weekly), *Weekly Guide to Selected Motion Pictures* (National Board of Review of Motion Pictures, Inc.).

The figures preceding the title of the picture indicate the number of critics who have been judged to rate the film A (recommended), B (intermediate), or C (not recommended) on its entertainment values.

Audience suitability is indicated by "A" for adults, "Y" for young people (14-18), and "C" for children, at the end of each line.

Descriptive abbreviations are as follows:

adv—adventure
biog—biography
c—in color (Technicolor, Cinecolor, Trucolor, Magnacolor, Vitacolor, etc.)
car—cartoon
com—comedy
cri—crime and capture of criminals
doc—documentary
dr—drama
fan—fantasy
hist—founded on historical incident
mel—melodrama
mus—musical
mys—mystery
nov—dramatization of a novel
rom—romance
soc—social-problem drama
trav—travelogue
war—dealing with the lives of people in wartime
wes—western

A	B	C		
—	2	5	**Across the Badlands**	*mus-wes AYC*
—	2	2	**Al Jennings of Oklahoma**	*wes-c A*
6	8	1	**All About Eve**	*dr A*
—	12	4	**American Guerrilla in the Philippines**	*war-dr-c A*
—	1	3	**Arizona Territory**	*wes AYC*
—	—	4	**Arshin Takes a Wife**	*mus-com A*
—	5	4	**At War with the Army**	*com A*
—	4	1	**Bandit Queen**	*mel A*
—	5	—	**Bedtime for Bonzo**	*com AYC*
—	5	6	**Between Midnight and Dawn**	*cri-mel A*
—	4	3	**Big Timber**	*mel AYC*
—	6	3	**Bitter Rice**	*dr A*
2	4	7	**Black Rose, The**	*adv-c A*
—	4	1	**Blazing Sun, The**	*wes-c AYC*
—	3	1	**Blue Blood**	*mel-c AYC*
—	4	2	**Blues Busters**	*mus-com A*
—	—	5	**Bomba and the Hidden City**	*adv AYC*
—	—	4	**Border Outlaws**	*wes A*
—	1	3	**Border Rangers**	*wes AYC*
—	—	6	**Border Treasure**	*wes AYC*
—	5	11	**Born to be Bad**	*dr A*
2	11	3	**Born Yesterday**	*com A*
—	10	4	**Branded**	*wes-c AYC*
—	5	12	**Breaking Point, The**	*dr A*
3	6	5	**Breakthrough**	*war-dr A*
—	2	2	**Buckaroo Sheriff of Texas**	*wes YC*
—	1	6	**Bullet for Stefano**	*dr A*
—	4	5	**Bunco Squad**	*cri-mel A*
—	—	3	**Buried Alive**	*mel A*
—	6	—	**California Passage**	*mel AYC*
—	3	1	**Call of the Klondike**	*dr AYC*
—	8	1	**Cassino to Korea**	*war-doc AY*
—	3	5	**Chain Gang**	*cri-mel A*
—	1	3	**Cheat, The**	*dr A*
—	—	4	**Cherokee Uprising**	*wes AYC*
—	1	3	**Christina**	*dr A*
—	4	3	**Company She Keeps, The**	*dr A*
—	5	6	**Convicted**	*dr A*
1	6	8	**Copper Canyon**	*mel-c A*
—	1	3	**Cossacks of the Kuban**	*mus-com-c A*
—	5	3	**Counterspy Meets Scotland Yard**	*mys-mel AYC*
1	6	1	**Country Fair**	*dr-c A*
—	2	1	**Cry Danger**	*cri-mel A*
3	7	5	**Cyrano de Bergerac**	*dr A*
—	9	3	**Dallas**	*wes-c A*
—	4	3	**Dancing Years, The**	*mus-com-c A*
—	7	10	**Dark City**	*mys-mel A*
—	1	3	**Dear Mr. Prohack**	*com A*
—	5	2	**Death of a Dream**	*doc A*
—	9	7	**Deported**	*dr A*
—	3	5	**Desert Hawk, The**	*adv-c A*
—	9	3	**Dial 1119**	*cri-mel A*
—	6	5	**Difficult Years**	*war-dr A*
—	1	3	**Distant Journey**	*war-dr A*
—	6	1	**Double Crossbones**	*mus-com-c AYC*
—	—	5	**Double Deal**	*cri-mel A*
—	2	1	**Ellen**	*mys-mel A*
—	3	8	**Emergency Wedding**	*com A*
—	—	7	**Experiment Alcatraz**	*cri-mel A*
—	11	1	**Eye Witness, The**	*mys A*
—	4	1	**Face to the Wind**	*dr A*
1	11	4	**Fancy Pants**	*mus-com AYC*
2	9	2	**Farewell to Yesterday**	*propaganda-doc A*
—	—	3	**Fast on the Draw**	*wes AYC*
—	2	4	**Film Without a Name**	*com A*
—	7	5	**Fireball, The**	*mel AYC*
—	3	5	**Flesh Will Surrender**	*dr A*
—	7	6	**Flying Missile, The**	*war-dr AYC*
—	8	4	**For Heaven's Sake**	*fan A*
—	1	3	**For Them That Trespass**	*cri-dr A*
—	3	4	**Frenchie**	*wes-c A*
—	5	4	**Frisco Tornado**	*wes AYC*
—	1	2	**Frontier Outpost**	*wes AYC*
—	7	5	**Fuller Brush Girl, The**	*com A*
—	4	3	**Gambling House**	*mel A*
—	3	1	**Gasoline Alley**	*com AYC*
—	3	1	**General and the Senorita, The**	*dr A*
—	—	4	**Girl in a Million, A**	*com A*
3	10	4	**Glass Menagerie, The**	*dr A*
—	8	—	**Goldbergs, The**	*com AYC*
—	4	1	**Golden Salamander**	*cri-mel A*
—	3	—	**Grandma Moses**	*doc AYC*
—	—	—	**Great Manhunt, The, see State Secret**	
1	4	1	**Great Missouri Raid, The**	*wes-c A*
—	6	7	**Grounds for Marriage**	*mus-com A*
—	1	2	**Gunslingers**	*wes AYC*
1	7	4	**Halls of Montezuma**	*war-dr-c A*
—	6	2	**Happiest Days of Your Life, The**	*com A*
—	8	5	**Harriet Craig**	*dr A*
3	11	2	**Harvey**	*fan A*
—	—	4	**Here Come the Huggetts**	*com A*
—	4	7	**He's a Cockeyed Wonder**	*com A*
—	3	4	**Hidden River**	*dr A*
—	11	4	**High Lonesome**	*wes-c AYC*
—	10	4	**Highway 301**	*cri-mel A*
—	5	2	**Hit Parade of 1951**	*mus-com A*
—	1	5	**Hoboes in Paradise**	*fan A*
—	4	—	**Holiday Rhythm**	*mus-com A*
—	5	—	**Holy Year at the Vatican**	*doc AYC*
—	7	2	**Holy Year, 1950**	*doc AYC*
—	5	2	**Hot Rod**	*mel AYC*

A	B	C		
—	5	1	**Hue and Cry**	*cri-com A*
—	5	2	**Hunt the Man Down**	*cri-mel A*
—	4	6	**I Killed Geronimo**	*wes AYC*
—	7	—	**I'd Climb the Highest Mountain**	*dr-c A*
—	1	2	**Ignace**	*mus-com A*
1	12	4	**I'll Get By**	*mus-com-c AYC*
—	5	4	**Indian Territory**	*wes AYC*
—	1	4	**It's Hard to be Good**	*com A*
2	12	—	**Jackpot, The**	*com A*
—	2	1	**Joe Palooka in the Squared Circle**	*mel AYC*
—	5	3	**Jungle Stampede**	*adv-doc A*
—	1	3	**Kangaroo Kid, The**	*mel AYC*
—	3	7	**Kansas Raiders**	*wes-c A*
—	3	7	**Killer That Stalked New York, The**	*cri-mel A*
2	10	2	**Kim**	*adv-c AYC*
—	1	3	**King of the Bullwhip**	*wes AYC*
5	12	—	**King Solomon's Mines**	*adv-c AYC*
—	6	6	**Kiss Tomorrow Goodbye**	*cri-mel A*
—	1	4	**Korea Patrol**	*war-mel A*
—	2	2	**L'Affaire**	*dr A*
1	8	1	**Last Holiday**	*dr A*
—	5	6	**Last of the Buccaneers**	*adv-c AYC*
—	5	—	**Law of the Badlands**	*wes AYC*
—	—	3	**Law of the Panhandle**	*wes AYC*
—	9	9	**Let's Dance**	*mus-com-c AY*
—	7	7	**Life of Her Own, A**	*dr A*
—	1	4	**Lightning Guns**	*mus-wes AYC*
—	2	6	**Lonely Hearts Bandits**	*mel A*
—	2	4	**Lost People, The**	*war-dr A*
—	4	4	**Mad Queen, The**	*hist-dr A*
1	7	4	**Mad Wednesday (originally set for release in 1947 as The Sin of Harold Diddlebock)**	*com A*
—	7	3	**Madness of the Heart**	*dr A*
2	6	3	**Magnificent Yankee, The**	*biog AYC*
—	5	3	**Man Who Cheated Himself, The**	*mel A*
—	2	2	**Manon**	*dr A*
—	3	3	**Marriage of Figaro**	*mus-dr A*
—	1	2	**Massacre Hill**	*wes A*
1	3	1	**Mating Season, The**	*com A*
—	8	2	**Milkman, The**	*mus-com AYC*
—	4	11	**Miniver Story, The**	*dr A*
—	4	—	**Missourians, The**	*wes A*
2	10	—	**Mister 880**	*dr A*
1	14	2	**Mr. Music**	*mus-com A*
—	5	1	**Mr. Universe**	*com AYC*
—	7	2	**Mrs. O'Malley and Mr. Malone**	*com A*
1	10	1	**Mudlark, The**	*hist-dr AYC*
—	1	2	**Mulatto, The**	*dr A*
1	8	6	**My Blue Heaven**	*mus-com-c A*
—	4	4	**My Widow and I**	*com A*
—	3	6	**Mystery Submarine**	*war-mel AYC*
—	7	9	**Never a Dull Moment**	*com AYC*
2	9	5	**No Way Out**	*soc-mel A*
—	2	2	**Noah's Ark**	*dr A*
—	6	1	**North of the Great Divide**	*wes-c AYC*
—	—	3	**O Sole Mio**	*mus-dr A*
—	4	—	**Odette**	*war-mel A*
2	5	—	**Of Men and Music**	*mus-doc AYC*
—	3	3	**Old Frontier, The**	*wes A*
—	3	6	**On the Isle of Samoa**	*mel A*
—	3	8	**Once a Thief**	*mel A*
—	3	1	**One Minute to Twelve**	*dr A*
—	2	3	**One Too Many**	*dr A*
1	8	—	**Operation Disaster**	*war-dr AYC*
—	5	2	**Operation Pacific**	*war-dr A*
—	—	8	**Operation X**	*dr A*
—	1	4	**Original Sin, The**	*mus-fan A*
—	2	5	**Orpheus**	*fan A*
—	2	3	**Our Daily Bread**	*propaganda-dr A*
—	5	10	**Outrage**	*dr A*
—	6	6	**Pagan Love Song**	*mus-dr-c A*
—	—	7	**Pancho Villa Returns**	*wes AYC*
—	1	4	**Paper Gallows, A**	*dr A*
—	8	3	**Paris 1900**	*doc A*
—	5	5	**Paris Waltz, The**	*mus-com A*
—	13	4	**Petty Girl, The**	*com-c A*
—	1	5	**Pigmy Island**	*mel AYC*
—	2	7	**Pink String and Sealing Wax**	*dr A*
—	3	8	**Prehistoric Women**	*dr-c A*
—	9	2	**Prelude to Fame**	*mus-dr A*
—	9	4	**Pretty Baby**	*com A*
—	2	4	**Pride of Maryland**	*mel AYC*
—	1	7	**Prisoners in Petticoats**	*cri-mel A*
—	4	2	**Queen of Spades, The**	*dr A*
—	4	1	**Raiders of Tomahawk Creek**	*mus-wes AYC*
—	1	4	**Redhead and the Cowboy, The**	*wes A*
—	5	2	**Redwood Forest Trail**	*mus-wes AYC*
—	2	2	**Return of Jesse James, The**	*wes AYC*
—	4	2	**Revenue Agent**	*mel A*
—	8	5	**Right Cross**	*dr AYC*
4	9	2	**Rio Grande**	*mus-mel AYC*
—	3	3	**Rio Grande Patrol**	*wes AYC*
—	7	3	**Rocky Mountain**	*mel AYC*
—	3	4	**Rogue River**	*mel-c A*
—	3	6	**Rookie Fireman**	*mel A*
—	3	2	**Rustlers on Horseback**	*wes AYC*
1	9	4	**Saddle Tramp**	*wes-c AYC*
—	3	—	**Scarf, The**	*cri-mel A*
—	1	4	**Second Face, The**	*dr A*
—	3	3	**Secrets of Nature**	*doc A*
2	8	1	**Seven Days to Noon**	*war-mel A*
—	4	6	**Shakedown**	*cri-mel A*
1	2	5	**Short Grass**	*wes A*
—	7	4	**Showdown, The**	*wes A*
—	5	—	**Sierra Passage**	*wes A*
—	—	3	**Silk Noose, The**	*cri-mel A*
—	2	2	**Silver Raiders**	*wes AYC*
—	—	3	**Sinners, The**	*dr A*
—	6	2	**So Long at the Fair**	*mys-mel A*
—	3	1	**Song of My Heart**	*mus-dr A*
1	2	6	**Sound of Fury, The**	*cri-dr A*
1	8	3	**Southside 1-1000**	*cri-mel AY*
—	1	3	**Souvenir**	*dr A*
—	2	3	**Stage to Tucson**	*wes-c AYC*
2	14	—	**State Secret**	*mys-mel AYC*
2	3	3	**Steel Helmet, The**	*war-mel A*
1	2	4	**Storm Warning**	*cri-mel A*
—	2	5	**Streets of Ghost Town**	*mus-wes AYC*
—	6	5	**Sun Sets at Dawn, The**	*cri-dr A*
—	8	1	**Sunset in the West**	*mus-wes-c AYC*
—	3	6	**Surrender**	*wes A*
—	3	2	**Sylvie and the Phantom**	*fan A*
—	2	4	**Taming of Dorothy, The**	*com A*
1	11	3	**Tea for Two**	*mus-com-c A*
—	—	6	**Texan Meets Calamity Jane, The**	*wes-c AYC*
—	1	3	**Third Time Lucky**	*mel A*
—	—	3	**Three Desperate Men**	*wes A*
—	8	4	**Three Husbands**	*dr A*
1	11	2	**Three Secrets**	*dr A*
—	—	6	**Timber Fury**	*mel AYC*
—	5	10	**To Please a Lady**	*dr A*
1	9	4	**Toast of New Orleans, The**	*mus-com-c AYC*
—	4	2	**Tomahawk**	*wes-c A*
—	3	3	**Tougher They Come, The**	*mel-c A*
—	5	2	**Trail of Robin Hood**	*mus-wes-c AYC*
—	—	5	**Train to Tombstone**	*wes A*
—	1	4	**Treasured Earth**	*dr A*
3	14	—	**Trio**	*dr A*
—	1	3	**Triple Trouble**	*com A*
1	8	4	**Tripoli**	*hist-dr-c A*
—	9	2	**Two Flags West**	*mel AYC*
—	1	3	**Two Lost Worlds**	*adv AYC*
—	—	6	**Two Orphans**	*dr A*
—	13	3	**Two Weeks With Love**	*mus-com-c AYC*
—	4	—	**Under Mexicali Stars**	*wes AYC*
—	—	3	**Under Sunny Skies**	*propaganda-mus-com A*
—	4	3	**Under the Gun**	*cri-mel A*
—	5	7	**Undercover Girl**	*cri-mel A*
—	3	11	**Vendetta**	*mus-mel A*
—	1	4	**Victors and the Vanquished, The**	*war-dr A*
—	3	4	**Vigilante Hideout**	*wes AYC*
—	6	8	**Walk Softly, Stranger**	*cri-mel A*
—	6	7	**Watch the Birdie**	*com AYC*
—	7	4	**Ways of Love**	*dr A*
—	10	4	**West Point Story, The**	*mus-com A*
—	3	4	**When You're Smiling**	*mus-com AYC*
—	1	9	**Where Danger Lives**	*mys-mel A*
—	9	5	**Woman on the Run**	*cri-mel A*
—	7	3	**Wyoming Mail**	*wes-c AY*
—	2	3	**You Can't Fool an Irishman**	*com AYC*

The Consumers' Observation Post

(Continued from page 2)

cases against business concerns and combinations in cases of alleged price-fixing takes a hand in behalf of fish consumers in this case or will furnish its aid and encouragement to those who are opposing the judgment of the state courts.

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AS THE MOTH-BALL SEASON APPROACHES, it is well to consider a few plain facts about the mothproofing problem. The cedar chest, even if specially constructed, will not do as effective a job of protection as a tight chest of any material properly dosed with paradichlorobenzene. In fact, this is considered by one of CR's consultants the most effective method, far superior to the use of a variety of mothproofing devices, vacuum cleaner attachments, and devices for spraying closets. Fumigation devices are expensive; many of the chemicals are dangerous; and sprays are ineffective. It is difficult to obtain a tight seal on closets which are to be treated with gas-forming chemicals, even if health regulations permit such treatment to be carried out. One pound of paradichlorobenzene in crystal form to 100 cu. ft., tightly sealed as in a chest, at room temperature, will kill clothes moths present, in four days' time, and is much the cheapest method.

* * *

DANGERS INVOLVED IN THE USE OF X-RAYS are too little understood and appreciated by laymen and even, in some cases, by those who are medically trained. In a comprehensive study of radiation damage which appeared in The American Scientist, Professor H. J. Muller of Indiana University, noted geneticist, refers to flagrantly excessive exposures that occurred in a shipbuilding plant in 1941 and 1942 when at least 50 persons were seriously burned as

the result of ill-regulated and excessive fluoroscopic X-ray examinations, mainly of minor injuries, carried on by relatively untrained laboratory assistants. Many of the victims later underwent amputations or were otherwise maimed for life. Some died. Professor Muller deplores the fact that the whole disaster was hushed up, with little notice given to the cases in either medical or lay press, so that the collection and recording of details in many cases was delayed and hindered, thus losing valuable information on the general problem of radiation damage to the exposed individual. In view of the current agitation over the aftereffects of an atom bomb explosion in this country, it would certainly seem wise for the U. S. Public Health Service to put some of its experts on the trail of such sufferers from the California tragedy as remain alive in order to obtain the benefit of and prepare suitable recommendations based on their experiences.

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GUMMED PAPER LETTERS AND FIGURES in several different styles and sizes, in black and white (colors at special rates), are available from The Tablet & Ticket Co., 1021 W. Adams St., Chicago 7. Prices in December 1950 ranged from 10 cents for a package of 10 of the same character, 1/8 inch high, to $2 for 100 of one character, 4 inches high. Boxes containing an assortment of figures and letters ranged from $7 to $11. Merchants, churches, libraries, clubs and other groups will find that these assortments may offer a convenient solution for their sign-making and poster problems. A catalog is available on request from The Tablet & Ticket Co., which has offices in San Francisco, Los Angeles, and New York, as well as Chicago.

* * *

RECENTLY TESTED:

Viscol Triple Action Waterproof Dressing (The Viscol Co., Stamford, Conn.), 6 oz. for 30 cents, is a well-known leather dressing much used by sportsmen. At the time of analysis, it was judged to be essentially a solution of dry cleaners' solvent and sulfurized oil. While the use of Viscol should keep the leather to which it was applied more pliable because of the coating of the fibers, and the lubricant present, it did not waterproof leather (as claimed) in the strictest sense of the word; it did, however, reduce water absorption, and it is believed would leave the leather in considerably better condition on drying out after wetting as compared with leather not treated with Viscol. (Complete waterproofing of leather is, of course, not desirable, as it is important that the pores of leather in shoes and most other articles be left open for the passage of air.)

PHONOGRAPH RECORDS

BY WALTER GRUENINGER

Please Note: In the ratings AA indicates highly recommended; A, recommended; B, intermediate; C, not recommended. Although nearly all new releases of serious music are heard, space narrows comment, generally, to items which merit high ratings.

Bach: *Sonatas Nos. 1 and 2 for Cello and Piano.* Casals and Baumgartner. Columbia LP 4349. $5.45. Best of the 10 Prades Festival disks with Casals playing beautifully. But these sonatas are for musically advanced listeners only. The recording is quite satisfactory though the balance favors the cello. As for the Prades series as a whole: the dining room of the girls' school which was converted into a studio seemed to lack the acoustical properties needed, particularly for the larger instrumental groups. While performances reach a high level of excellence, though in some cases not as good as performances already in the catalogue, the recording rules the disks out of the highly recommended class. Second best: LP 4350 with Casals playing *Sonata No. 3* and overside, Serkin (piano) playing Bach's *Chromatic Fantasy and Fugue in D Minor* and the *Italian Concerto*. Third best: LP 4351 — *Concerto in C Minor for Violin and Oboe* with Stern and Tabuteau and *Concerto in D Minor for Two Violins* with Stern and Schneider.
Interpretation AA
Fidelity of Recording A

Brahms: *Waltzes* (Op. 39) & **Chasins:** *Parade and Period Suite.* Chasins and Keene (duo-pianos). Mercury LP 10061. $4.85. The famous set of 16 waltzes and less effective works by Chasins played skillfully and brightly recorded. Best of 11 new Mercury LP disks. Close behind it are "Abram Chasins Plays Great Keyboard Classics," "Polkas from Bohemia," by Smetana, and the richer (musically) "Smetana's Bohemian Dances"...all played by solo piano. The Smetana disks rate A for fidelity. No waver in pitch in my pressings — exceptional these days in 33 rpm. and 45 rpm. disks, which may vary from one pressing to the next *of the same selection.* Hear all piano recordings before you purchase or get permission to return the record if it wavers when you hear it at home.
Interpretation AA
Fidelity of Recording AA

Poulenc: *Concerto in G Minor for Organ, String Orchestra and Timpani,* Biggs with the Columbia Symphony Orchestra under Burgin & **Franck:** *Prelude, Fugue* and *Variations* (Op. 18) and *Piece Heroique.* Biggs. Columbia LP 4329. $5.45. Poulenc's concerto is one of the most exciting new works I have heard. It possesses strength, wit, repose and exceedingly clever tone coloring. The Franck music is melodic and free from excessive chromaticism. Both works are unusually well recorded, considering the difficulty of organ recording, and beautifully played.
Interpretation AA
Fidelity of Recording AA

Prokofiev: *Symphony No. 6.* Philadelphia Orchestra under Ormandy. Columbia LP 4328. $5.45. First performed in October 1947. The importance of the symphony cannot be denied, ranking as the most personal and accessible of Prokofiev's works with the exception of *Peter and the Wolf,* weakly narrated by Eleanor Roosevelt in RCA Victor LP 45. Performers play splendidly and the velvety recording ranks close to the best on Columbia LP's.
Interpretation AA
Fidelity of Recording AA

Schumann: *Frauenliebe und Leben* & **Brahms:** *Vier Ernster Gesänge.* Kathleen Ferrier (contralto). London LP 271. $5.95. The Schumann is one of the great song cycles. Expressively sung. The Brahms is more pretentious, but a performance equal to this is rare. More feeling on the part of the pianist would help but it is a small blemish on an otherwise outstanding disk.
Interpretation AA
Fidelity of Recording AA

Strauss: *Die Fledermaus.* Patzak, Gueden, Dermota, etc., Vienna State Opera Chorus, with Vienna Philharmonic Orchestra under Krauss. London LP disk 281/2. $11.90. The comic opera which ranks among the most popular stage works ever written. Direction, singers, and orchestra of this complete recording are first rate, revealing signs of careful preparation and teamplay and an organic whole rare in recorded music. The fidelity is more than satisfactory even though the orchestra sounds thinner than usual, with singers to the front. Sung in German and recorded as an official production of the Vienna State Opera in September 1950... Certainly this two-disk set and even the one-disk condensation (London LP 305) offer far more style and authority than RCA Victor's LP 1114 which presents Munsel, Stevens, Peerce, etc., in "highlights" sung in English.
Interpretation AA
Fidelity of Recording AA

Tchaikovsky: *Nutcracker Suite.* Stokowski and His Symphony Orchestra. RCA Victor LP 46. $5.72. Graceful, skillfully constructed suite of eight numbers, one of the most popular in the symphonic repertoire. Stokowski has recorded it often. This is just about as efficient a production as his earlier ones. Top range weak and whistle-ey compared with many other new orchestral records but fidelity good in other respects.
Interpretation AA
Fidelity of Recording A

A Treasury of Immortal Performances. Under this title RCA Victor is bringing out 12 "Red Seal" LP recordings of "great historical and musical interest." I have heard 8 vocal LP's which include such fabulous performers as Caruso, Ponselle, Bori, Ruffo, Chaliapin, Farrar, Garden, Tamagno, McCormack and others. Principally, the recordings are dubbings of previously released operatic disks. While the fidelity is considerably below today's, particularly the accompaniment, most of the interpretations are distinguished. Surface noise has been reduced tremendously, an advantage these disks have over the 78 rpm. shellacs you may have in your attic. Your choice of records comes down to your favorite performers. But for variety of artists and music and unusually long playing time compared with others in this series, I suggest as a start the 14 recorded performances of "The Golden Age at the Metropolitan," RCA Victor LP 1006. $5.72.

OTHER LP'S HIGHLY RECOMMENDED

If the music appeals to you, the following disks are likely to serve you well, for performance and fidelity are excellent:

COLUMBIA. **Meyerbeer:** *Les Patineurs Ballet* & **Bliss:** *Checkmate.* Royal Opera House Orchestra, Covent Garden, under Hollingsworth and Irving. 4362.
HAYDN SOCIETY. **Haydn:** *Missa in Temporare Belli in C* performed by the Akademie Chorus of Vienna, Orchestra of the Vienna State Opera, etc., under Gellesberger on 2021.
LONDON. **Schubert:** *Piano Quintet* ("Forellen") played by Members of the Vienna Octet on 223. . .*Gerard Souzay Recital* (baritone) on 245. . .*Operatic Highlights for Orchestra* played by the Paris Conservatory Orchestra under Fistoular on 180. . .**Wagner:** *Die Meistersinger—Act II.* Gueden, Treptow, Schoeffler, etc., under Knappertsbusch. 284/285.
WESTMINSTER. **Schubert:** *Four Hand Piano Music* played by Badura-Skoda and Demus on 50-47. . .**Boccherini:** *Six Trios for Two Violins and Cello* played by Schneiderhan, Swoboda and Benesch on 50-42 and 50-46. . .**Locatelli:** *Elegiac Symphony* and *Concerto Grosso in F Minor* played by Vienna Symphony Orchestra under Swoboda on 50-30. . . *Trio Sonatas* by Handel, Telemann, Bach played by Schneiderhan, Swoboda (violins), Holletschek (cembalo) on 50-36. . . **Dvorak:** *String Quintet* (Op. 77) played by the Vienna Concert House Quintet on 50-26. . .**Schültz:** *Four Small Sacred Concerti* and *Four Symphoniae Sacrae* sung by Huges Cuenod on 50-43.